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HYDRATE OF CHLORAL: A THERAPEUTIC STUDY.

BY

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IT was said by a great master, Samuel Taylor Coleridge, that every thinking and working man should take stock now and then of his intellectual material, test its force and action, and satisfy himself that it still has practical meaning and power. Those busy craftsmen, physicians and surgeons, ought to take earnest heed of Coleridge's saying. Things in use yesterday go out of fashion to-day, although they are as true and vital as ever; or the reasons for their original use fade from the memory; or a popular whim runs against them, and professional judgment bows unworthily to ignorant prejudice. The fluctuations of the therapeutic market make an interesting chapter of medical

history. And we obey Coleridge's precept when we take a remedy of high value and importance, trace its chemical genealogy, estimate its relation to other remedies, and try to fix its just position in the cosmos of medical science.

For, the way to know how to use one medicine well, is to know how to use all other medicines well. To be a specialist in therapeutics, in the sense of knowing a great deal about the application of one medicine and very little about all others, is an empiricism not above the quack's level. The man of one book has been embalmed in a cynical proverb; but the man of one prescription is a creature not only ridiculous, but full of danger. Drawing an illustration from general literature, one secret of Professor Gardiner's success as the historian of the great Civil War lies in his freedom from insularity. He knows not only English affairs, but foreign affairs; and he knows the links which bind these two groups of affairs together. So with the therapeutist; he ought to know the links, physiological and pharmacological, which connect the anodynes with each other, and the whole group of anodynes with their therapeutic neighbours. For neighbours they are, and only a narrow "insularity" will make an idol of one drug and forget the honour due to every member of the therapeutic code.

Now, concerning the hydrate of chloral, the subject of our present study, we must allow that the promise of its magnificent dawn has not been altogether kept; and yet we hardly know why. If the healing properties attributed to chloral be true, they are true for ever; a law in therapeutics is as valid and lasting as a law in physiology. It is beyond the waves of human thought and the whims of human temper. Very unreasonable, therefore, are those oscillations of opinion, called fashion, which at one moment

dignify a remedy with an ovation, and only a few years afterwards doom it to comparative neglect. Medical virtue once established, is a part of the things that are: prejudice and apathy cannot disestablish that virtue, or make as though it had never been discovered. Think what glory there was in hypodermic medication ten or twelve years ago, and how little in comparison it is used now! What unworthy stewardship this is! Such, however, are the devious paths of human thought and action, and so it ever will be.

Chloral* and chloro-acetic acid were discovered by Liebig in 1839. June 2, 1869, may be chronicled as the therapeutic birthday of chloral; and the thing was brought to light from the experience of Dr. Oscar Liebreich, then chemical assistant to the Pathological Institute of Berlin. In the *Charité* at Berlin the first experiment of chloral on man was made. It was administered subcutaneously to an insane person in very small doses. No local irritation followed; but the general effect was small. One dose of 20 grains by the mouth produced a sleep for five hours. In another patient, suffering from stupor and melancholia, 50 grains of chloral dissolved in water caused sleep for sixteen hours.

In July, 1869, Spencer Wells said that he had received two ounces of chloral, a substance which had been exhibited to the Medical Society of Berlin as a "new hypnotic and anæsthetic."

In the *Lancet* for October 2nd, 1869, the Editor writes that "chloral had become a subject of interest at a period when, in the absence of all other topics of a like kind, it could stand alone and invite universal attention. To this circumstance it owed an unusually fine introduction to

* Chemical abbreviation for "hydrate of chloral."

the medical world." Liebreich, it seems, imagined that chloral might supersede chloroform, bichloride of methylene, and ether. But by more judicious advocates the claim put forward for it was, not that it was an anæsthetic, but a rival to opium. One drachm of chloral was announced to be a "not immoderate dose" for an adult. It was observed that the "stupor or sleep" was attended with great muscular prostration and decrease of animal temperature; while sensibility was proportionately exalted. This "exaltation of sensibility" was specially insisted on by Demarquay and other French observers; but Spencer Wells's first experience of chloral was as an analgesic. In a "severe and intractable case of sciatica," defying huge quantities of hypodermic morphia and atropine, 30 grains of chloral "procured for the patient the best night she had enjoyed since the beginning of her illness—a night of perfectly tranquil sleep, from which she awoke fresh and well as from natural slumber."

At the Exeter meeting (1869) of the British Association for the Advancement of Science, Dr. B. Richardson presented a valuable experimental report. His postulate was, that the insensibility and the sleep which chloral produces are not intended to represent or to rival the action of the volatile anæsthetics which we use for the abolition of pain during surgical operations. Whatever of useful intention there might be in the introduction of chloral, was included in the virtue it possessed of causing prolonged sleep. The general result of its administration to vertebrate animals was to cause perfect sleep, without any preliminary excitement, sign of oppression, or disturbance. Dr. Richardson quotes, with apparent approval, the theory of the action of chloral as propounded by Liebreich. When it is treated with an alkali, it is resolved into

chloroform and a formate. The blood is an alkaline fluid; therefore, says Liebreich, when chloral is introduced into the organism, every small particle of it will consume the surrounding quantity of alkali, and the decomposition will be completed only after the required amount of alkali has been furnished by the blood. In the smallest point of time the minimum quantity of chloroform is developed, and passes to the first place of action, the ganglia-cells of the cerebrum. With the increase of chloroform in the blood, the action extends to the ganglia of the spinal cord, and, lastly, to the ganglia-cells of the heart. The chloroform passes out of the body as chloroform, and is not resolved by oxidation into anything else. We may take it as established, therefore, that the agency at work is chloroform, chemically made within the body. But the really remarkable point is, that the nervous power of the heart is the last that suffers; and Richardson proved that in fatal cases the function of the heart is the last destroyed. It is well to recall a fact so contrary to modern teaching, which teaching is a perversion of the original doctrine of chloral.

Next came some surgical experience from the *clinique* of Langenbeck. By means of chloral he quieted delirium, following comminuted fracture of the humerus, in a woman of intemperate habits, after the utter failure of opium, morphia, and brandy. Langenbeck emphatically praises the "peaceful normal sleep" so quickly induced by chloral.

Sir James Simpson now appears upon the scene, with credentials which entitle him to be heard; and his confident oracle was, that the new remedy would prove of immense value in the practice of medicine, surgery, and midwifery. He confirms all the good things spoken of it,

and he prescribed it for hysteralgia, dysmenorrhœa, and pleurodynia. As a pure hypnotic, Simpson gave chloral in the excessively large dose of 50 or 60 grains.

A few months later (March, 1870), chloral had advanced to the stage when it was called by high authority an "interesting drug." An "epidemic rage" for the new medicine had begun. It was time, therefore, for "the principal features of its action to be fairly made out." It came to be understood that the term *anæsthetic* could not be applied to chloral. The heavy and prolonged sleep produced by the largest dose is essentially different from anæsthesia. As a "producer of sleep," chloral was acknowledged to be inferior to opium alone; but the character of that sleep was superior to that caused by opium or any other drug. It was beginning to be recognised that not only unpleasant, but very dangerous, symptoms might result from such a dose as 50 grains. And, further, there was an indirect influence of chloral over pain. In chloral-sleep pain might be, so to speak, forgotten; but it could not be said that the pure and severe neuralgic type of pain was controlled.

It was incidentally remarked, about this time, that during the quiet slumber produced by chloral the inhalation of even a few minims of chloroform produces profound anæsthesia.

A paper by Dr. James Russell on the use of chloral in fever (*Glasgow Med. Journal*, February, 1870) was of much importance, and might be read now with interest and profit. When we give opium to a typhus patient, we combine two similar pathological tendencies; and we may precipitate into narcosis, functions previously going that way. Opium paralyses nerve- and muscle-tissues ("narcotic paralysis"). It is the almost perfect analogy between

natural sleep and chloral-sleep which makes this drug so useful in febrile diseases. The condition of the pupil is the same in both cases. In all forms of sleep, the pupils expand the moment the sleeper is aroused and the eyes are opened. In opium-sleep, the pupil remains contracted. The chloral-sleeper may be roused at any time. He is at once in the full command of all his faculties and functions: he may take food, cough, expectorate, pass urine; and after these offices are fulfilled, he may fall again into unconsciousness. The patient may be said to be not properly awake; or, if he is, none of the excitement returns for which the chloral was given. The excretions are not affected by the administration of chloral. It far exceeds the bromide salts in efficiency and certainty as a hypnotic in fever, even when one of these salts is prescribed to the extent of a drachm every hour.

Dr. Russell's theory of the action of chloral was in harmony with Dr. Richardson's views. The alkalinity of the blood (as of other animal fluids) is increased by the typhus-fever process. The action of chloroform produced by the decomposition of chloral, represents the ultimate physiological action of chloral; and the chloral yields chloroform to the blood in exactly the way (so it is asserted) in which it might be expected to do the maximum of good and the minimum of harm. To the Edinburgh school of medicine, therefore, we are indebted for the scientific use of chloral in fever; and its beneficial application consists in preventing delirium by establishing normal sleep. The disease is not cut short, nor is its usual course affected in any material way.

In the autumn of 1870, cases were related by Crawford, Tuke, and Clouston to exemplify the usefulness of chloral in acute mania (puerperal or otherwise), puerperal

convulsions, and as a remedy for the destructive habits in general paralysis of the insane.

About the same time, welcome news came from France in favour of the chloral treatment of traumatic tetanus. A case was given by M. Dufour, of Lausanne, in which a perfect recovery took place at the end of a month, an average of 12 grammes of chloral *per diem* having been administered. If it be contended that the patient got well by lapse of time, it must be allowed that the medicine exerted an invaluable remedial effect by reducing spasm, affording sleep, and permitting food to be taken. Departing for a moment from the strict chronology of our subject, we find (*Practitioner*, February, 1882) Mr. J. H. Salter treating a case of acute traumatic tetanus by an enormous dosage of potassium bromide and chloral, and with complete success. At one period the patient took half an ounce of the bromide salt and three drachms of chloral in twenty-four hours. In the course of twenty days, 60 drachms of chloral and 80 drachms of potassium bromide were consumed. For a time 5 to 10 grains of chloral were introduced hypodermically, in addition to the above, three or four times in the twenty-four hours; and the influence of these hypodermic doses remained a longer time than when the chloral was taken by the mouth.

Such was the store of evidence, gradually accumulating, which brought to chloral its high medical repute. The demonstration was slow but sure. Physicians looked upon their new gift as having secure and positive attributes, nearly all of which were on the good side of the account. Chloral seemed to be a pure and uncomplicated hypnotic. It was excellent for all disturbed and diseased conditions of the mind and nerve-centres attended with delirium (going on, perhaps, to mania), sleeplessness, and

convulsions.* As an analgesic, its operation was uncertain; and when it acted as such, it might be in consequence of the sleep induced outlasting the pain, and rendering the patient insensible to it. In repeated small doses it was found to be a sedative for whooping-cough, spasmodic croup, and asthma. It was early observed, too, that in "head affections," with torpidity of bowels and retention of urine, chloral stimulates and helps the bowels and bladder to a more healthy action.

At the end of 1870, chloral was in the position of many illustrious people: being eulogised over-much, jealousies and alarms are raised. Every man and thing destined to become great must submit, in the first place, to the cruel ordeal of flattery; then to the more tonic discipline of criticism, and even reproach; and not until the man and the thing have been well weighed is it possible to form a just judgment about them. Was not chloral too good to be true? Must not such a splendid boon be counterbalanced by a thousand subtle banes? It is curious that Dr. B. Richardson, who was among the first prophets to arouse our enthusiasm, was among the first to quench it. In a lecture on Experimental and Practical Medicine (*Lancet*, February 11th, 1871), he notes that the period had already arrived when the medical use of chloral was lessening, and its popular use was increasing. The novelty of the drug, and the natural desire of testing for oneself, were the impulses that had moved medical men to prescribe chloral largely. "Chloral-drinking" had begun to prevail, with its train of serious

* In John Bunyan's allegory of the *Life and Death of Mr. Badman*, we read: "His doctor told him that his alarms had come from an affection of the brain, caused by want of sleep; they were nothing but vapours and the effects of his distemper." Now, Mr. Badman's "distemper" would have been speedily cured by chloral.

and irregular symptoms. Three classes of people were said specially to resort to chloral: alcoholic devotees; sufferers from neuralgia and other painful chronic diseases; and persons who have much grief or intellectual care. Nor was the late Dr. H. W. Fuller less emphatic in his warning, and he quite frightened the profession by the story of two cases. One person, in an advanced stage ("anasarca and bronchitis") of chronic Bright's disease, nearly died after taking the usual chloral-draught of the hospital, which contained 30 grains; and another patient (seen in consultation), described as a "young lady, aged 20, who was previously in fair health," died within eleven hours after taking the same quantity of chloral. Practitioners in America, too, reported that the long-continued use of chloral produced toxical effects somewhat like those produced by ergot.

Thus were doubt and uneasiness sown among the fraternity of medicine. But out of chaos Order is sure to come, and out of darkness Light, if men are earnest in the search for truth and human in their desires and sympathies. Here was a medicine which appeals to the nervous system when it is out of tune and time: let us group the phenomena of that system according to its physiological anatomy, and the therapeutic laws of chloral almost group themselves. The disorders of cerebration include all deviations from mental health; motorial disorders include every disturbance of muscle, or interruption of the will in commanding muscle; and pain is the terrible emblem of perverted sensory forces. What can chloral do for all or any of these? What message does it bring for the healing of our patients?

It was an early and seductive tradition of chloral, that in "brain cases," however wild the delirium and however

acute the mania, in a very short time there may be calm repose. But even in 1879 the value of chloral in treating *delirium tremens* was so little known or understood, that Dr. George Balfour then spoke of it as far from being established in medical opinion. (*Lancet*, February 1st, 1879.) He relates the first case of *delirium tremens* submitted to chloral-treatment in the Edinburgh Royal Infirmary. The man had been ill for a fortnight, and was ferociously mad. Two doses (30 grains each) of chloral, with an hour's interval between them, brought sound sleep, from which the maniac awoke a rational being. Similar success attended the chloral-treatment of the disorder in all other cases (sometimes 45 grains for a dose were administered). We can hardly imagine the old days when Sir Thomas Watson and Dr. Todd recommended,* in sheer despair, a "hair of the dog that bit him" (*i.e.* more alcohol) as a remedy for a morbid condition which alcohol had caused. I should grieve to misunderstand my veteran tutor and teacher, Dr. George Johnson; but in his admirable *Medical Lectures and Essays* his voice has an equivocal note in it when, writing of alcoholic delirium and praising the utility of chloral, he adds: "Opium is a valuable aid in the treatment, and will often cut short the disease." And again: "Some form of alcoholic stimulant may calm nervous excitement and procure sleep." The precepts of our living masters always deserve attention; but Dr. Johnson's views, now quoted, are at variance with actual therapeutic practice. Observe the problem: We are trying to get a patient out of the pseudo-narcosis of alcohol, and we are coaxing him to take food; ought we

* I heard Dr. Todd's "clinical lecture" at King's College Hospital in which this advice was given.

to give a medicine (such as opium) which will throw him back into narcosis, stop the cleansing of the blood by the excretions, and spoil the little appetite he has? And then to offer him more alcohol—is it not to add poison to poison?

In this delirium of tremors, the absence of sleep is both cause and consequence. Now comes the chloral with its gracious help: sleep is only a natural anæsthesia; and if it does not come by nature, it must be brought by art. Sleep is never a narcosis (in the language of pharmacology), though it may wear the likeness of narcosis: an appropriate formula for sleep would be, that the body is kept very calm and still for the purposes of nutrition, and of repairing wear and waste. The riot and fury of alcoholic delirium shake the tenement to pieces: it is not the mind only that raves, but the mind tears the body as well. Sleep is therefore all the more necessary to restore shattered muscles and nerve-centres; and chloral-sleep is the most perfect mimicry of nature-sleep which medicine can bring.*

In October, 1886, I was called to treat a lady severely ill with the horrors and terrors of alcoholic poisoning.† About her collateral symptoms, it is only needful to say that she had diligently soaked her tissues for years with brandy or wine; but from all this misdirected industry no organic degradation was apparent, except a syncopal tendency from heart-failure. The urine was free from albumen. Being even then a partial slave of the shallow fallacy that chloral might injure the heart more than

* Further, sleep restores the nerve-energy which is wanted for the digestion of food. Without a sufficiency of food, there is a danger of fatal collapse at any moment from stoppage of the heart's action.

† In the management of this case, I acknowledge with gratitude the assistance rendered by the Clifton Nursing Institution.

sleeplessness, I tried at first to cherish sleep by a large quantity of warm liquid food only. The frenzy was not in the least allayed. Between October 24th (the first day of medicinal treatment) and November 2nd, both inclusive, 13 drachms and 20 grains of chloral were administered in the following way: at first, 20 grains every three hours; then the same quantity every four or five hours; on October 28th, every eight hours; and after that at irregular intervals, according to urgency. At the earliest stage of treatment there came tranquillity; then profound, though broken, sleep; the sleep became more continuous with perseverance in the chloral: by degrees the medicine was withdrawn, and the waking intervals were more and more sane; food was plentifully taken in the shape of eggs, broths, and milk with soda-water *ad libitum*. Ordinary health seemed quite restored on the 4th of November. Another attack of the same kind of illness (in 1887) was treated successfully in the same way. Since then our supervision has been watching and preventive; and we find that when our patient is managed like the British soldier, and kept poor in purse, she abounds in health.

For the special delirium of acute alcoholic intoxication, chloral is the supreme remedy. My contention is, that there is no room for a scrap of doubt about it. A medical man who neglects it, or declines to use it, sins against certain knowledge; nor is he less a sinner if he goes back to opium or digitalis, or any other empirical stuff which has been luckily buried and forgotten. The absolute certainties of medical art are mournfully few, and we ought so much the more to value those we have. One would have expected that the splendid and accurate *Principles and Practice of Medicine* by the late Dr. Hilton Fagge would have made it clear, beyond all cavil, that the

chloral-treatment of the so-called *delirium tremens* is the one anchor which we may nearly always trust; and our disappointment is great when we find it spoken of merely as having been recommended by the late Dr. Anstie fifteen or sixteen years ago. No particular praise is bestowed upon it. In due time our text-books of Materia Medica and Therapeutics will tell the student less about the dull chemistry and botany of his drugs, and more about their application to the exigencies of disease. It will not be thought sufficient, for instance, to say that "chloral is valuable" for this or that, without saying how and when it is to be prescribed, and what are the limitations of its use.

Motor disturbances go along with delirium so commonly, that the transference is easy when we pass to spasm and convulsion occurring without delirium. There is plenty of material here for the beneficent exercise of chloral. Let us consider, firstly, a form of convulsive disorder seen in children: the fits are very frequent (20 or 30 in the twenty-four hours), but short in duration, and singularly abrupt and sudden both in onset and termination. They are attended with absolute loss of consciousness. Now, it was pointed out by Dr. Rayne (*Lancet*, August 26th, 1876) that the muscular phenomena of these "fits" correspond very closely with those artificially obtained by Professor Ferrier on stimulating certain frontal and parietal convolutions of some of the lower animals. In a typical case narrated by Dr. Rayne, the patient, a boy aged five, enjoyed good general health, and the attacks were attributed to a blow upon the head. Chloral brought a speedy cure, after time had been lost in the prescription of what were called (with a touch of sarcasm) the "usual remedies."

I refer again to the therapeutics of tetanus, in order to quote the high authority of Dr. Lauder Brunton in favour of large doses of chloral. (*Practitioner*, August, 1877.) He says that they may be given without fear, and that the treatment is most valuable.*

In the neural terminology of Dr. Hilton Fagge, chorea is the ideal of the co-ordinated spasm.† In the acute grades of this nerve-storm, experienced therapeutists differ in their advice. The beginning of the chloral-treatment of chorea is associated with what was nearly a tragedy. To a girl, aged eight, suffering from the disease in an aggravated form, a nurse gave by mistake one night 45 grains of chloral: most alarming symptoms ensued, and the life of the little patient was in extreme jeopardy for some hours. There was an immediate improvement, however, in the choreic symptoms; and in the course of another day there was a complete and permanent cure. Such is the story published by Dr. Gairdner in the *Glasgow Medical Journal* for 1870. Emboldened by this happy accident, Dr. Bridges (*Practitioner*, March, 1877) urged that chloral should be given for chorea in doses that will cause sound sleep. The principle guiding us ought to be this: the patient must have ten hours' sleep in the twenty-four. The disease is naturally suspended during sleep, and therefore a drug which produces sleep is plainly indicated. A dose of ʒss. is administered; this may have to be repeated, or half as much, or less, if the patient does not sleep. Immediately on awaking another

* See also some cases under the care of M. Gueniot (*British Med. Journal*, October 6th, 1877).

† ". . . that distemper which impels the nerves
To motion without will; a dance 'tis call'd,
Of which Saint Vitus is the dancing-master."

WALTER SAVAGE LANDOR, *Last Fruit off an Old Tree*, p. 417.

dose is given, less or more as the patient had slept well or ill; and on waking again, another dose, less than the one before, and so until the amount of sleep required had been obtained. The chloral is then discontinued until the following night. By this ingenious plan Dr. Bridges tells us that he cured two bad cases—the first within twenty-four hours, the other within three days. Dr. Day reports rapid success in acute chorea by prescribing 10 grains of chloral every two hours.*

The far-reaching potency of chloral is shown in unexpected ways. A girl (daughter of a tradesman), aged now about 17, has been under my care for three or four years on account of epileptic seizures, more or less grave, and occurring at irregular intervals. Great benefit resulted from trustworthy medicines, notably a combination of sesquicarbonate of ammonium and bromide of ammonium; but there were fluctuations and some severe disappointments. The addition of 10 grains of chloral to the old nightly dose of the ammonium-salts was so successful, that the patient has had no epileptoid attacks since.

In an address on Analgesics delivered in 1886,† I ventured to suggest a way of administering chloral which might mitigate pain of a certain kind. Five grains dissolved in water, with a little syrup of tolu, should be given every hour for four or five doses, and then less frequently according to their effect. Since then the subject has had my constant attention. There is no pretension to rivalry between opium and chloral: a

* Dr. Althaus' view of chorea was, that it is an active hyperæmia of the corpora striata and neighbouring parts; and that chloral may cause anæmia of these structures.

† To the Therapeutic Section of the British Medical Association, at its Brighton Meeting.

sharp, decisive pain afflicting one nerve, or one small area of nerve-supply, lies within the jurisdiction of opium or of quinine, and nothing else. But neuralgia has many first-cousins. The "scalding" and "burning" of osteo-arthritis, when it affects the hands and wrists, are greatly relieved by chloral. From 15 to 20 grains at bed-time, with the liberty to take 8 or 10 grains more (if needed) at three or four o'clock in the morning, are to many sufferers a grateful boon, which is highly appreciated in our Mineral Water Hospital.

Chloral has been a great deal used for the migraine type of headache; but the literature of this therapeutic function is so large as to forbid the luxury of quotation.

So long ago as June, 1870, the late Mr. Weedon Cooke published records of cases in which 10 grains of chloral were given three times a day, to relieve the pain of malignant disease. And there can be no doubt of the utility of this method before that stage of misery is reached when our only resource is hypodermic morphine.

The administration of chloral in obstetric medicine has been illustrated by Dr. Playfair, and also by the late Sir James Simpson. The sponsor of chloroform would be naturally biassed in favour of chloral*; and he emphatically maintained that chloral lessens the pangs of labour, without restraining contractions of the uterus. Dr. Playfair says practically the same thing. He considers that chloral is applicable chiefly at a period of labour when we should not allow the inhalation of chloroform—namely, towards the end of the first stage. A mixture should be prepared, containing one drachm and a-half of chloral in six fluid ounces of water; of this,

* Simpson remarked incidentally that people suffering from irritable bladder and chronic cystitis derive much more benefit from chloral than from comparatively larger doses of opium.

one ounce is the standard dose, which may be repeated after twenty or thirty minutes. If the patient becomes drowsy, a third dose need not be given for an hour or an hour and a-half; and under no circumstances is more than one drachm of chloral to be taken during the course of a labour.

We will now briefly discuss the sedative* effect of chloral on two great physiological systems—the Respiratory and the Digestive.

The whole respiratory tract is submissive to the sedative power of chloral. Dr. George Johnson praises it for the spasm of *laryngismus stridulus*;† and for quieting the struggles of inflammatory croup, no combination excels chloral and ipecacuanha. The capacity of chloral to prevent the asthmatic paroxysm is acknowledged by all, and it may be combined with belladonna and iodide of sodium. In many shades of dyspnœa which have asthmatic affinities, especially when accompanied by a tinge of cyanosis on the skin, the hurtfulness of opium is a measure of the charm of chloral. In whooping-cough, chloral may indirectly check serious head and chest complications, by mitigating the convulsions and soothing nerve-irritability. Much larger doses must be given than have been usually recommended. For cough of every kind, especially that which attends bronchitis and pulmonary consumption, chloral should be tried; but of course it sometimes fails, and morphine may be the only thing useful. Chloral lessens the quantity of expectoration in all sorts of bronchial troubles. A short paper on "Chloral in Phthisis"

* The word *sedative* is used in the sense which the late Dr. Anstie made classical.

† Dr. Hughlings Jackson speaks of *laryngismus stridulus* as a "respiratory convulsion," and recommends chloral as the best remedy. His paper in *Brain* (Vol. II., p. 18) is well worth going through, but it is tough reading!

was one of the last contributions to practical medicine by the late Professor Hughes Bennett, and he spoke of its efficacy in arresting night-sweats.

It is possible that there has been some exaggeration about the power of chloral over diseases and disorders of the alimentary tract. But in my many notes, gathered from many sources, I find that for "agonising pain in the abdominal viscera," of uncertain origin, one drachm of chloral has been dissolved in fluid starch and administered as an enema. Given by the mouth, chloral has been said to allay the irritable diarrhœa of tubercular ulceration; and testimony has come from several quarters that it relieves the obstinate vomiting of organic disease and of pregnancy. We cannot doubt the anodyne value of chloral in the treatment of gastralgia, lead colic, and certain forms of dysmenorrhœa; but the agony of the passage of calculi (hepatic or renal) is not within its reach.

The evidence is tolerably unanimous that the therapeutic virtue of chloral does not suffer by frequent repetition.

There is an ethical element in chloral, alcohol, and opium which demands a weighty consideration. The perverted use of these substances may destroy self-control, and finally overthrow the moral and intellectual faculties. And so the casuists say that a huge responsibility rests on the adviser who prescribes chloral or alcohol or opium, lest haply they may be abused through ignorance or morbid craving. Undoubtedly. But the man who does not shrink from duty is never afraid of responsibility. If the necessity arises, the necessity must be met. The wise physician studies the "environments" of his client, and especially the force of his character.

The "poison of misused wine" has been the theme of poetry as well as the lament of psychology; and who would deliberately put the weak man or woman in the way of temptation? But if we are to strike out of the Pharmacopœia all the things which weak men and women have abused, our best traditions are made of none effect, and the reign of Timid Medicine begins.

It was said of a certain man that, although not a wit himself, he "rang the bell which called other wits together." My humble office in this paper has been to "ring a bell," and to assemble our therapeutic friends for a brief parley. Before this honourable convocation my plea would be: Here is a thing, rich and fine, wrested from the secret storehouse of Nature, and endowed with curious powers of healing. It has been challenged on all sides; exalted to the firmament, and then comparatively neglected. It has received the scrutiny of the keenest judgment, and passed the ordeal of the ripest experience. Within limits that every day become clearer, the medical application of chloral is now a postulate of the first order—a fact of the highest importance and interest. We are sure of our possession; we cannot and dare not pass it by. And it is "meet and right" so to employ it that it may, as far as possible, lighten and brighten the dark drama of human suffering.

DILATATION OF THE STOMACH.

BY

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DILATATION of the stomach is not uncommon, and gives rise to a very troublesome form of dyspepsia. I propose in this paper to study the causes of dilatation, and the measures best adapted for its relief. The condition may be produced either by an obstruction at the pylorus to the expulsion of the gastric contents, or by morbid changes in the muscular walls of the stomach without pyloric obstruction. Stenosis of the pylorus is most commonly due to cancer, but may also be produced by simple fibrous stricture, or by the cicatricial contraction resulting from the presence of an ulcer in this situation. I do not propose to deal with this group of cases, in which the conditions present do not, unfortunately, admit of cure.

As to the etiology of other varieties of dilatation, two chief theories have been advanced: (1) that the stomach is the primary cause of the disease, other symptoms being secondary; and (2) that there is a general neurasthenic tendency, in which the stomach suffers in common with other organs.

The actual mechanism of gastric dilatation has been attributed to the following causes: (1) to hereditary weakness of the gastric muscle;* (2) to gastritis,

* Bouchard, *Leçons sur les Auto-intoxications.*

which may go on to sclerosis of the gastric walls: under this head may be included the abuse of alcohol, which sets up degenerative changes resulting in atrophy of glandular structures and fatty degeneration of muscle. Gastric ectasia sometimes occurs after long continued high fever and in severe anæmia; and it is suggested that, just as anæmia gives rise to fatty degeneration of heart-muscle, followed by dilatation of the cardiac cavities, it may in a similar fashion produce dilatation of the stomach. It is important to bear in mind that this condition may occur in the later stages of typhoid fever, and protract convalescence.

One case that recently came under my observation seems to show that it may occasionally lead to death. A patient died unexpectedly in the fifth week of the disease, apparently from syncope; the fever had run a mild course, and she was progressing favourably towards convalescence. At the autopsy, the only cause to which death could be attributed was that the stomach was enormously distended with gas, and had pushed up the diaphragm and, presumably, thus interfered with the action of the heart.

(3) Glénard of Lyons states that in women suffering from dyspepsia after childbirth, and sometimes in other persons, a condition which he calls "enteroptosis" obtains; that is to say, the mesenteric attachments of the transverse colon are relaxed, it tends to fall forwards, and drags with it the stomach, which undergoes atony and dilatation, and may even be actually lowered in position.

(4) In nearly fifty per cent. of cases of gastric ectasia, the gastric juice contains an excess of hydrochloric acid. Kussmaul and others think that this hyperacidity may lead to spasm of the pylorus, and that this spasm, constantly

recurring and opposing the passage of food through the pylorus, produces dilatation. Lastly, antecedent dyspepsia, bringing about too long sojourn of the food in the stomach; irregular or too frequent meals; and the ingestion of large quantities of heavy food with much indigestible residue, or of food insufficiently masticated, may all lead to dilatation.

In support of the second theory above mentioned, that gastric ectasia is merely a part of a general neuropathic tendency, in which the stomach shares—the ancient hypochondria,— it may be urged that the symptoms of neurasthenia, and of certain forms of gastric dyspepsia, are very similar, that both conditions frequently co-exist, and that it is often exceedingly difficult to assign them to their respective causes.

Judging from my own experience, I should say that in some cases the stomach appears to be alone affected. The condition is sometimes found in fairly strong men of the working class, who are accustomed to eat large meals of heavy food with much indigestible residue; the stomach, in fact, gradually gives way under the weight of the mass of food that it has to support. In other patients the condition of general weakness is equally striking: the muscles are everywhere weak, soft, and flabby; their motor force is impaired, whilst their irritability is in marked excess, as shown by the readiness with which they respond to a tap upon their mass or on their tendons, whilst the pectorals often show the phenomenon of "myoidema." In these cases we may suppose that the gastric muscle shares in the general muscular weakness, and so allows dilatation to occur.

For examination, the patient should lie on the back,

with the knees drawn up, breathing quietly with opened mouth and relaxed abdominal parietes. If there is gastric dilatation, a distension of the upper part of the abdomen, or peristaltic movements of the organ, may be observed. The area of stomach-resonance is enlarged: this normally should not extend higher than the sixth rib; its average vertical diameter in the adult male is 5 inches; in the female, $4\frac{1}{2}$ inches; and the transverse diameter is $8\frac{1}{2}$ inches (male), $7\frac{1}{2}$ (female).* A splashing sound may be heard on succussion of the patient. More importance is to be attached to what has been termed "partial succussion." Placing the hands upon the abdomen, a splashing sound is evoked by sharply depressing the fingers of either hand alternately. If this splash is obtained at any time below a line drawn from the umbilicus to the salient angle of the false ribs on the left side, or if it is obtained anywhere over the stomach when from five to six hours have elapsed since the last meal, there is a pathological degree of enlargement of the stomach.

During fasting, when an increased area of resonance, but no splash, is fonnd on examination, information may be gained by letting the patient drink a glass or two of water: a zone dull on percussion occupying the lower part of the previously tympanitic region at or below the level of the umbilicus (on the left side), indicates dilatation. Very often there is great tenderness over a spot just below and to the right of the ensiform cartilage. Other procedures, such as the injection of effervescing mixtures, or the passage of a bougie, are objectionable, from the discomfort they cause the patient. The administration of salol, gr. xv., is a useful aid in determining the length of time that food stays in the stomach: this substance, a

* Mathien, *Gazette des hôpitaux*, Feb., 1888.

compound of salicylic acid and phenol, is decomposed by the pancreatic, but not by the gastric juice. One hour after its ingestion, salicylic acid should normally be detected in the urine by the perchloride of iron reaction: in cases of dilatation, this reaction may not be obtained until one and a half, or even two or three hours after ingestion.*

These procedures enable us to state that the stomach is dilated, and that fluids stay in it too long a time; they may be supplemented by chemical examination of the gastric contents, withdrawn by a syphon.

Dilatation of the stomach may come on at any age, but is most common during adult life; of twenty-two cases lately under my care, eleven of the patients were between forty and sixty years of age. Several of these patients were accustomed to eat large meals of coarse food; one dated the onset of the illness from an attack of enteric fever, and another from blood-poisoning after eating some tainted beef. The symptoms fall into two sets—"direct," due to disturbance of the alimentary canal, and "remote." Of the former, the patients complain of pain and sensation of weight at the epigastrium, coming on at a varying time after meals, or constantly present day and night, and aggravated by food. They often suffer from pyrosis, and from bitter or fœtid eructations two or three hours after meals. Flatulence is present in most cases, and may be extreme. The pain may be felt chiefly in the back and sides. In the majority of cases there is no sickness, and the appetite may be good, or even voracious. There is generally constipation, sometimes alternated with the passage of loose fœtid evacuations. Attacks of colicky pain coming on during the night, and waking the patient, are characteristic: they are generally

* Mathien, *loc. cit.*

accompanied with excessive distension of the stomach, and sometimes with shivering, pallor of the skin, coldness of extremities and violent palpitation.

Gastric ectasia is often associated with pulmonary phthisis, chlorosis, and hypochondriasis: Bouchard* thinks that it predisposes to these affections by interfering with nutrition.

As to the remote symptoms: drowsiness, headache, depression of spirits, vertigo, feebleness, palpitation, and all the numerous symptoms of this kind are frequent. Asthmatic attacks are not uncommon. Albumen is present in the urine—rarely exceeding a trace—in about 15 per cent. of the cases; it promptly disappears under treatment. Sometimes there is peptonuria. Bouchard lays stress on the occasional presence of a body, as in some cases of diabetes, which gives a chloroform-like odour to the breath, and a vinous red colour on the addition of perchloride of iron to the urine. He also draws attention to the occurrence of nodosities resembling Heberden's, but situated at the bases of the second phalanges of the fingers instead of the first: I have observed these nodosities in four cases. A species of fainting fit may occur, attributable, perhaps, to a neurosis of the vagus. For instance, a man of 29, whilst reading, felt as if his chest were suddenly and forcibly gripped; he believed that he lost consciousness for a few moments. The attack was preceded and followed by palpitation, and also followed by flatulent distension of the abdomen. A few days later, another similar attack occurred, attended with a stabbing pain in the head, but without loss of consciousness. Under treatment for the stomach-condition, these symptoms at once ceased, and did not recur.

* *Loc. cit.*

Lastly, gastralgia coming on at the commencement of gastric digestion, may give rise to such violent pain as to simulate biliary colic.

In diagnosis, it is often difficult, and sometimes impossible, to determine the exact condition present. The presence of a tumour, an enormous degree of dilatation which progressively increases, and the absence of hydrochloric acid from the gastric juice, point to organic disease. In atonic functional ectasia, we generally find a lesser degree of dilatation, and this varying in extent from time to time, with a normal or excessive quantity of hydrochloric acid in the gastric juice. M. Mathien considers that the reduction of the stomach-area of resonance under the influence of ipecacuanha, is the most important element in prognosis. Should the degree of dilatation remain unchanged after treatment has been persevered in for some time, the inference may be drawn that the muscular tissue is degenerated.*

Although failure of the nervo-motor functions of the stomach is probably the primary cause of dilatation, it is soon attended with disorder of the chemical processes of digestion. The presence of food in the stomach later than five hours after ingestion, is pathological; in about six hours fermentative changes begin, and after seven hours the alimentary residue will undergo exclusively acid or putrid fermentations.† The products of these fermentative changes will tend to still further irritate and distend the stomach, and being absorbed, to give rise to auto-intoxication.

The indications for treatment are, therefore: (1) to evacuate the contents of the stomach, if it is no longer able to propel them into the duodenum; (2) to give an

* *Le Progrès médical*. February, 1887. † Bouchard, *loc. cit.*

appropriate diet; (3) to check anomalous fermentations, and so prevent auto-intoxication; (4) to excite the contractility of the gastric muscle; and (5) to regulate the action of the bowels and improve the general health.

In the class of cases now under consideration, in which the dilatation is more or less curable, and not due to organic disease, evacuation of the stomach-contents and lavage are not, as a rule, necessary. The procedure is merely palliative; it has the disadvantages of diminishing appetite and digestion, and is disagreeable to most patients. In the severer cases, however, it gives relief at the commencement of treatment, and may be afterwards discontinued; and in acute dilatation, *e.g.* from the ingestion of putrid meat, or of other injurious food, the stomach is to be at once evacuated.

In regulating the diet, the object in view is to distend the stomach as rarely, as little, and for as short a time as possible. There must be no eating or drinking between meals. The food must be finely divided, capable of thorough mastication, and must leave little indigestible residue. Bouchard, following the plan formerly advocated by Chomel, reduces the quantity of fluid taken to a minimum, in order not to dilute the gastric juice. Meat, eggs, fish, and milk, with crust or toast, are the best articles of diet; rice, barley, and oatmeal, are generally well digested: no green vegetables are allowed, and fats, except in the form of emulsion, are best avoided. Alcohol and the soft parts of bread are especially liable to give rise to fermentative changes. Wine, if taken, is to be diluted with water; a small quantity of light beer, or a dessert-spoonful of brandy or whisky, may be allowed; tea and coffee, unless very weak, are best avoided.

Dujardin-Beaumetz* divides the patients into two categories—those with constipation, and those with diarrhœa. For the latter he forbids meat and eggs, and orders a purely vegetable diet of starchy foods—vegetables and fruits, care being taken that the vegetables are tender, finely divided, and well cooked.

The meals are to be few and far between—substantial but not copious; the patient should rest a short time after each meal. They may be three in number: the first between 8 and 9 a.m., the second at 1 p.m., and the third at 7.30 p.m. In treating a case of ordinary severity, I generally recommend at first the following diet: for breakfast, milk, bread and milk, porridge, or an egg in milk. For dinner, either fish, milk pudding, with toast or crust of bread, or bread and milk. For supper the same, varying the articles of food. If, after a few days, the patient is free from pain, the dietary is cautiously extended by the gradual addition of chicken, game, or meat, until a diet something like the following is finally adopted:—for the first meal, egg or fish and dry toast, with a small teacupful of weak coffee or cocoa and milk: for the second and third meals, boiled fish, poultry, or well-cooked hot or cold meats, eggs, custard or milk puddings, with a small quantity of vegetables and bread; cooked fruit may be taken; of fresh fruit, strawberries, peaches, grapes, oranges (the juice), are alone advisable. 6—8 oz. of fluid is allowed at each of the two last meals. To make up for the deficiency of fluids, and as a stimulant to the intestinal movements, the patients are recommended to take a full glass of hot water at night, to which ʒij. of whisky or brandy may be added, if desired. In the more severe cases, it is better to keep the patient entirely on milk for

* *Therapeutic Gazette.* January, 1887.

a few days; if neither milk nor farinaceous food can be digested, peptonised milk is to be employed, and given in small quantity every hour. As improvement takes place, the quantity taken at a time is increased, and given less often, and the peptonised is gradually replaced by ordinary milk. Then the yolk of an egg may be taken, beaten up in milk, two or three times a day; raw oysters are, as a rule, well digested. Later, preparations of rice, barley, sago, or oatmeal, take the place of some of the milk, and the dietary scale is now steadily extended. In these patients rest in bed for from seven to fourteen days is most important, and materially shortens the duration of treatment.

For the relief of pain, hot drinks, chloroform water, cocaine, a liquid preparation of bismuth with dilute hydrocyanic acid or liquor morphiæ, ♏v. in hot water, are useful. Sometimes the solid subnitrate of bismuth answers best, and arsenic is often valuable. If the pain is not great, a mixture containing dilute hydrochloric acid, with strychnine and one of the liquid preparations of pepsine in chloroform-water, taken after meals, aids digestion and checks fermentation. For the latter purpose, Dujardin-Beaumetz* employs carbon disulphide water: β naphthol and sulpho-carbolate of soda may also be used. Acids must not be given if there is any suspicion of gastric ulcer. Of the remedies employed with the object of exciting the contractility of the gastric muscle, ipecacuanha, originally recommended by Mathien, takes the first place. It may be given in doses of gr. ½ to gr. ij., in powder, half an hour after meals, two or three times a day. I generally give gr. j., in milk, half an hour before rising and at bedtime, increasing the dose to gr. ij. if it is well borne. Strychnine

* For mode of preparation see *Therapeutic Gazette*, January 15, 1887.

is also of service, and may be advantageously combined with bismuth, and given in hot water, since hot fluids stimulate the gastric muscle and relieve pain. Electricity is useless.

As to laxatives, rhubarb, compound liquorice powder, cascara sagrada, podophyllin and nux vomica, or the use of small enemata with a dose of ʒij.—ʒiij. of glycerine, taken in water before breakfast, are amongst the most useful. Cold baths and change of air are the best general tonics.

In conclusion, patients who faithfully carry out the above rules, generally get relief from pain in two or three days, even after years of illness: the amelioration is complete during treatment, and they are often apparently cured in three or four weeks; but it is necessary to warn them that a relapse will occur unless they keep to the prescribed diet, to which they should adhere for from one to two years.

Clinical Record.

ON THE TREATMENT OF ACUTE INFLAMMATIONS OF THE MIDDLE EAR. By CHARLES F. PICKERING, F.R.C.S.

Acute inflammations of the middle ear are of two kinds: (1) Those which are not accompanied by suppuration, and (2) Those in which suppuration takes place.

These inflammations may be brought about by zymotic diseases, by injury, or cold; and should suppuration take place, the complications arising during its existence are often so serious that it is of the greatest importance to consider what is the best method of treatment for preventing, or (if discharge takes place) for arresting, the formation of pus. To one like myself, having the charge at a hospital of a special department for the treatment of diseases of the ear, the ravages one sees connected with these affections are peculiarly distressing, especially when one feels that by an early and proper method of treatment, they may be avoided.

The first warning symptom of commencing acute inflammation of the middle ear is pain, and usually acute pain—sometimes so acute and distracting, that the patient may be said, without exaggeration, to go "mad with pain:" although in some few cases there is no pain at all; of these I have seen only a few examples.

When the ear is examined, and the surgeon finds that

an acute inflammation of the tympanic cavity exists, he should immediately take measures to thoroughly purify the external meatus, so that, should suppuration unfortunately become established, the pus is discharged into an aseptic cavity, which, being occluded by a plug of antiseptic wool, prevents the intrusion of germs.

Means should also be at once adopted to arrest, if possible, the course of the disease. Leeching behind, and more especially in front of the ear, will often instantly stop the pain, and lead to a subsidence of the trouble: next, fomenting the ear with hot water at short intervals, with a large sponge, is desirable. Poultices are most objectionable, as they favour suppuration and are dirty. Extract of belladonna and glycerine in equal parts should be smeared around the ear, or chloroform and opium liniments should be applied; but nothing should be poured into the meatus that is not perfectly aseptic. Instillations of cocaine in a warm saturated solution of boracic acid of 20 per cent. strength, or of plain hot boracic lotion, may be used. The affected side of the head should be covered by cotton-wool. Medicines given internally should be opiates to ease pain, and other remedies suggested by the constitutional state of the patient. Antimony (if the patient's condition allows of it) may be tried, and will often quickly lead to a subsidence of the trouble. The primary purification of the ear is best carried out by syringing with warm perchloride lotion, 1 — 2000; after which a little iodoform should be placed in the meatus, which is lastly plugged with salicylate wool.

Should suppuration occur, the discharges should be cleared from the ear by daily syringing the new aseptic meatus with warm boracic acid lotion, and the wool plug which forms the antiseptic dressing always replaced.

Under this perfect method of antiseptic treatment, the suppuration is, in most cases, arrested in a few days, and perforations of the drum rapidly heal, even if very large, and usually leave the hearing unimpaired.

Air should never be forced into the tympanic cavity during the acute stage, or, if pus is formed, before the abscess bursts; it will almost invariably lead to an increase of the symptoms.

After the discharge has lasted a day or two, air should be injected up the Eustachian tube, so as to clear the tympanum of pus and free the tube from obstruction—which is now easily done, the swelling having subsided. As the air is, I believe, filtered in its passage up the tube and so freed from germs, no harm can arise from that source by inflation. Pulv. acid. boracic. may be insufflated into the external meatus after each syringing; and if the discharge has any tendency to become chronic, pulv. aluminis should be mixed with the boracic powder. If this treatment were carried out in all cases, we should see very little chronic suppuration of the ear.

I am not in favour of opening the tympanic cavity by incising the drum when pus is suspected, except under very special circumstances. Opening an abscess of the middle ear seems a tempting surgical procedure, but practically it is not often needed; nature makes the best opening, and all cases do well if properly treated afterwards. If an opening is made, it is often a very imperfect means of exit for the pus, and nature has to do the work herself by making an opening somewhere else; but I think an incision is advisable when there is severe constitutional disturbance, or prolonged great pain, or when the abscess is slow in perforating the drum.

Acute inflammations of the middle ear usually stop short of suppuration, and quickly subside under the treatment recommended for arresting the course of the disease, the hearing also becoming quite normal; but should the hearing be left impaired, it will be improved by inflations of the tympanic cavity, which are best done with Politzer's bag. If much deafness remains fluid exudations probably exist in the middle ear, and if they cannot be removed by inflations, accompanied by placing the head in a position to allow the fluid to run down the Eustachian tube by the force of gravity, the drum must be punctured and the fluid expelled into the meatus, and so removed. Where the hearing is slow in recovering, injections into the tympanic cavity may be used through the tympanic catheter. These should be astringent, if slight exudations exist; or, if there is thickening of the mucous membrane, solutions of pot. iodid. or vapour of iodine are most useful. These, shortly, are the means I employ, and which I have seldom to supplement by other remedies.

Health-Resorts in the West of England and South Wales.

I.

BOURNEMOUTH.

BY

ALFRED J. H. CRESPI,

Wimborne.

THE official opening of the Direct Bournemouth Railway is a good text for a description of that rising West Hants watering-place. Bournemouth has been growing in favour, and competing vigorously with other and older towns over which it has unquestionable advantages, the chief being its comparative newness. Some watering-places like Weymouth have had an existence of several generations, and their older streets are narrow, crooked, and unattractive; but that does not apply to Bournemouth, which has sprung up in the lifetime of people still living. The roads are straight, excellent, and broad; its side streets wide and mostly in good order; and the *tout ensemble* has a picturesqueness rarely found in English towns. Moreover the area covered is extensive, and the houses are well built, with ample space around them.

The bright climate is one of its chief advantages, and rightly so. Nowhere, however, in the United Kingdom is the winter warm, agreeable, and dry; nowhere can invalids sit out day after day. Nevertheless, there are wide differences, and the southern and south-western places have decidedly less cause for complaint than those in the north. For a British health-resort, Bournemouth is greatly

favoured, and has many attractions for invalids who cannot go abroad to winter. With the rapid cheapening of continental travel, even our most fortunate health resorts are, however, feeling foreign competition keenly. I shall lay before the reader some valuable tables of temperature and other climatological observations, from which he will see the exact position of Bournemouth.

TABLE I.

EXTRACTED FROM MR. MARRIOTT'S TABLES.

1885.	ABSOLUTE.		Mean Temperature.	Range.	ANNUAL.			Relative Humidity.
	Max.	Min.			Cloud.	Rainy Days.	Inches.	
Alston	80.4	5.1	42.4	75.3	7.3	225	42.26	87
Cheadle	82.8	21.0	45.6	61.8	6.7	201	30.25	87
Bournemouth ...	82.7	21.3	48.8	61.4	5.9	164	27.26	81
Torquay	86.3	24.8	49.6	61.5	6.4	176	32.05	78
Guernsey	82.8	29.1	51.4	53.7	7.0	169	30.42	83
1886.								
Alston	77.7	2.0	42.5	75.7	6.9	229	63.2	83
Cheadle	78.8	18.2	45.9	70.6	7.1	213	36.41	87
Bournemouth ...	85.2	21.4	49.5	63.8	6.0	181	33.59	82
Torquay	82.3	24.3	49.6	58.0	5.9	193	37.75	—
Guernsey	78.1	29.2	51.5	58.9	6.7	198	40.25	86

TABLE II.

EXTRACTS FROM MR. GLAISHER'S TABLES FOR 1886.

		ABSOLUTE.		Range	MEAN.			Cloud.	Rainy Days.
		Max.	Min.		Max.	Min.	Temperature.		
Bournemouth ...	1st Quarter	57.5	21.5	36.0	42.7	32.6	37.6	6.1	50
Wolverhampton	,, ,,	60.1	13.4	46.7	39.9	28.8	34.3	8.0	48
Bournemouth ...	2nd ,,	75.2	30.0	45.2	58.7	44.6	51.0	5.3	39
Wolverhampton	,, ,,	73.9	27.0	46.9	58.5	40.7	48.0	7.8	43
Bournemouth ...	3rd ,,	85.2	37.9	47.3	67.6	52.9	59.6	4.6	30
Wolverhampton	,, ,,	81.8	34.4	47.4	66.3	49.0	56.5	6.6	35
Bournemouth ...	4th ,,	69.6	23.1	46.5	51.9	40.6	46.2	5.6	62
Wolverhampton	,, ,,	70.6	19.4	51.2	48.0	36.7	42.1	7.5	53

TABLE III.

COMPILED BY MR. WILLIAM MARRIOTT.

HOURS OF SUNLIGHT.

	1885	1886
London	1018	1003
Bournemouth	1524	1538
Buxton	983	679
Ventnor	1704	1683
Blackpool	1326	1239

These tables are on the authority of Mr. Glaisher, F.R.S., and Mr. William Marriott, the able Assistant-Secretary of the Royal Meteorological Society, and cannot be disputed. They dispose by the iron logic of inexorable figures of any claims for a Sicilian beauty of climate. They show that Bournemouth enjoys a climate *three* degrees warmer than Wolverhampton, with about the same range of temperature and the same number of rainy days, but with not quite such a low absolute minimum. The one respect in which Bournemouth eclipses the Midland towns is, in the greatly larger amount of sunlight: in other words, there are twice as many hours of sunshine at Bournemouth as at Cheadle or Wolverhampton; consequently, on many days when it is not tempting to be out in the Midlands, at Bournemouth outdoor exercise is sufficiently pleasant. The biting east wind at Bournemouth—a disagreeable feature of the climate of the south coast from Brighton to Penzance—may fairly be set against the small amount of fog near the sea.

The climate of the United Kingdom is remarkable for its equability: the ocean-breezes modify it in all districts pretty equally; so that between the South of England and

the most northerly Scotch islands the difference of mean temperature for the year is barely six degrees; and, contrary to the impression entertained, however, July in the south is 11° Fah. higher than July in Uist, while the difference in the January temperature is scarcely appreciable. From the beginning of November to the end of March, longitude, not latitude, is the most important factor.

Bournemouth is the name given to a large, somewhat ill-defined area, covered more or less thickly with houses. The northern part is Parkstone, and is in the parish of Poole; then comes a long, narrow district of houses—Branksome, Bournemouth West and Bournemouth East, and, still more to the east, Boscombe. Indeed, from Poole to Christchurch—a distance of nine miles—a good deal of scattered building exists. As Bournemouth is not incorporated, it is not easy to speak with certainty as to the population: 30,000 is the figure often given; but this probably includes parts of Poole and Christchurch.

The main portion of Bournemouth is curiously shaped; it is long and narrow, extending three miles along a straight, handsome, main thoroughfare, the old Christchurch road. The town, unlike many other seaside watering-places, is not exactly on, but at the distance of half-a-mile from the sea; at some parts approaching nearer, at others being farther. From no part of the town can the water be seen, although a few houses on the east and south cliffs look down on the beach, with its bustling crowds, and the magnificent new pier. No road extends along the sea, though one or two lead to it; no stately terrace or crescent looks over the sea; and in this matter the contrast between Bournemouth and some other watering-places is decided. To the stranger there is, consequently, the great charm of novelty. Bournemouth is singularly favoured in one respect—

indeed, I do not know any other health-resort to compare with it;—it is, the cheapness and inexhaustible variety of its sea-excursions. Without harbour, without shelter, it seems the very last town to have such unrivalled advantages; but then only four miles off is the capacious and convenient harbour of Poole, and, early and late, steamers ply from the pier at Bournemouth to Yarmouth, the Needles, Ryde, Ventnor, Cowes, Swanage, Torquay, and, though rarely, to the French coast. A guinea ticket entitles the holder to all the shorter excursions for the season: this is remarkably reasonable.

Another feature is the churches, far in excess of the requirements of the scanty population; and in the superabundance of places of worship it resembles Torquay and Brighton. Only one, St. Peter's, has great architectural pretensions: it is certainly one of the finest in the diocese, and is striking from its great size, lofty and graceful spire, and abundant handsome ornamentation.

Bournemouth is not easy to describe: with no principal railway-station, with scarcely any centre like most inland towns from which to start, and with no salient features, it does not lend itself to the requirements of the descriptive writer. It lacks splendid natural attractions: it has no Derwent Parade like Matlock; no splendid Promenade or Park like Cheltenham; no Jephson Gardens like Leamington; and no Pulteney Street and Royal Crescent like Bath. The Gardens, however, are no mean set-off, and on sunny days are crowded with visitors. Though small, and not conspicuous for fine timber and splendid flowers, they are completely sheltered from the wind, and are abundantly furnished with comfortable seats. It is a singularly handsome, clean, well-built, attractive place, with a light, sandy soil, quickly drying after rain; many

handsome shops, and not a few fine villas, to which innumerable additions are being made.

Its pine-woods are its special feature. The soil being dry and sandy, is not well suited to deciduous timber; but pines flourish, and many side streets, especially on the East Cliff, are well shaded and extremely pretty, and in those places where the builders have not been energetically at work, glens and chines remain that present a strikingly pretty appearance, totally unlike anything else which I have seen. The rhododendrons, too, in June are very fine, and the display of blossoms magnificent. Branksome Chine is especially famous for its luxuriousness at that pleasant season.

The town abounds in hotels, lodging and boarding houses, and prices ought not to be high. Complaints are rife though as to the charges, and, I am sorry to add, many visitors have had cause to complain. At ordinary seasons hundreds of rooms are to let, and lodging-house keepers are vociferous in their complaints that the place is empty; and as no palatial terrace faces the sea, and no broad and magnificent promenade lays itself out for the opulent, no part of the town should demand exorbitant rents, and one can only regret the imprudence of lodging-house keepers.

Amusements are not abundant—at least, so residents say—and the theatre, one of the prettiest and most beautifully arranged I have ever seen, has unfortunately been converted into a room for miscellaneous entertainments. Of land excursions the favourites are, Wimborne, famous for its magnificent and unique Minster, with its central and west towers and curious chain library; and the New Forest. During the summer, carriages crowded with excursionists ply many times a day to Wimborne and to

Rufus' Stone, the latter twenty miles off. The most beautiful country, the picturesque Park and White Farm at Crichel, and the superb Museum at Rushmoor, can only be reached from Wimborne, between which and Bournemouth there is a service of fifteen trains up and as many down a day. Christchurch Priory is also very grand, and in size, massiveness, and singularity, has no nearer rival than Salisbury Cathedral, and Romsey Abbey; the last is not easy to reach, though its splendid proportions and unique architecture make an impression never effaced.

But Bournemouth is a health-resort: and for what diseases is it good, when is it in season, and who should go there? Enquiries are readily answered: it is always in season, and good in all complaints; in truth, many visitors are always there. Although reckoned a winter resort, it is universally a summer favourite. In July it is fairly full; but in August and September it is literally crowded, and were prices more reasonable few lodgings would be empty. In winter the place is practically deserted, though less so than in spring; at any rate, this is what residents say. It is not judicious to call a place the English Nice or Mentone, it makes strangers expect too much; and to promise immunity from cold and other climatal disagreeables is still less prudent. With March the weather often becomes bright, and brief spells of pleasant weather may be expected. These increase in length and frequency through April, and from the early part of May to the middle or end of August grounds of complaint are few. The autumn, after the break-up of the weather in October, is often dull and wet, with frequent mild, soft, and humid days, on which exercise is pleasant enough—foxy days sailors call them—the precursors of gales of rain and wind.

Bournemouth is charming, and rapidly growing in

popularity and favour—rather heavily handicapped though by the infrequency of trains on the Somerset and Dorset: there are only three good trains to Bournemouth in the afternoon on that line, and not one in the morning; while from West Bournemouth only three good trains in the morning set off for the north, and not one in the afternoon. It is startling, but true, that one has to leave Bristol at 6.20 a.m. to reach Bournemouth at 11.15—five hours to traverse sixty-four miles; while one cannot leave Bournemouth in the afternoon for Bristol or Bath by any train travelling at good speed, five hours being again required. Much is expected of the Direct Bournemouth Railway from Brockenhurst to the East Station, which misses the angle at Ringwood and avoids the difficult and tedious route from that quaint old town to Bournemouth. Should the new loop be well worked, it will increase the advantages of the town, and attract many more visitors from the North and from Town. Other urgent improvements are, doubling the whole Somerset and Dorset system, and readier access to the North, with fewer delays at Bath and Templecombe; and more amusements of a high order. Visitors must not be regarded as mines of wealth; most, indeed, in these hard times, are only just able to pay their way with economy. The rich few are everywhere welcome; but Bournemouth must not forget the poor millions.

Reviews of Books.

A Manual of Animal Vaccination. By Dr. E. WARLOMONT. Translated and edited by ARTHUR J. HARRIES, M.D. London: J. & A. CHURCHILL. 1885.

Vaccination Vindicated, being an Answer to the Leading Anti-Vaccinators. By JOHN C. MCVAIL, M. D., D.P.H. Cambridge. London: CASSELL & COMPANY, Limited. 1887.

A Pamphlet on Vaccination. By WM. WOODWARD, M.D. London: SIMPKIN & MARSHALL. 1888.

WE owe an apology to the author and translator of the first named of these works for our tardy recognition of a book which, in the present disturbed state of the public mind, should be in the hands of every medical practitioner, whether he is likely to be called upon to perform the operation of vaccination or not.

Nearly the first half of the work is taken up with "General Observations on Vaccination," in which its history and the questions relating to humanised lymph are conveniently summarised. But it is the second part—"concerning Animal Vaccination"—which gives the book its special interest. The needless fears about the transmission of syphilis are of course banished by this method; and, on the question of inoculating tubercle by the vaccination-process, Dr. Warlomont insists upon the impossibility of doing "so by means of *superficial* insertion of its bacilli." The author sums up the matter thus "Vaccination is free from danger when it is practised with necessary precautions, skill and care. It is not more harmful than piercing the ears to place rings in them."

We regret to say that the book is without an index, thus, inviting unfavourable comparison with Dr. Seaton's classic work on Vaccination.

Dr. McVail's book is of a kind different from the preceding, but of eminent value. It is a monument of industry, consisting of statistics of the most useful description, in reference to the power of vaccination in mitigating smallpox. It is a work indispensable to anyone engaged in the vaccination controversy, and is furnished with an admirable index, much

facilitating the use of the copious figures by which the arguments of the book are substantiated. In a certain sense, it is unfortunate that in proportion to its good results the importance of vaccination fails to be recognised, as the more remote we get from smallpox epidemics the less we are able to realise our indebtedness to the prevailing efficacy of this operation. Dr. McVail has done the community a service, in preserving, and presenting in a convenient and accessible form, the overwhelming evidence of the benefits of vaccination.

Dr. Woodward's pamphlet consists of a paper read by him before the Worcester Young Men's Christian Association. It is very useful in its way, and is to be commended as an active Public Vaccinator's earnest defence of the value of vaccination.

Vaccination has got into undeserved discredit by the way in which its details have been carried out by thoughtless or careless operators. It is much to be desired that all vaccinations should be taken out of the hands of private practitioners, and allowed to be performed only by public vaccinators. The difficulties in the way of this much-needed reform could be easily overcome. Vaccination, as an important branch of preventive medicine, should be under Government inspection. Not only is there great difficulty, privately, in obtaining trustworthy lymph, often necessitating a resort to unauthorised sources, but, in deference to the sentimental objections of ill-informed parents there are many practitioners of good social standing who are not ashamed, by vaccinating by one or two small insertions, to earn a cheap popularity, although thereby a serious danger is added to the life of a child thus made unfit to successfully resist a possible attack of smallpox. There are also doctors of a lower grade who set themselves up in unwholesome opposition to the Public Vaccinator, and, by performing the operation for a degrading fee of sixpence or a shilling, with a vaccination also much reduced in quantity—and therefore in quality—draw off a considerable number of ignorant mothers from the Vaccination Station, the efficiency of which becomes impaired through a greatly diminished attendance seriously limiting the selection of lymph, and the proper management of which becomes well-nigh impossible.

In the light of Marson's figures (Seaton's *Handbook of Vaccination*, ed. 1868, p. 216; McVail, p. 36; Woodward, p. 15) confirmed by all after-experience, conduct such as this,

in various walks of professional life, seems little short of criminal, and has now reached such appalling magnitude as to urgently call for Government interference.

If vaccination is to be a reality, and not merely something which leads its subjects into a fools' paradise, the State must ensure, by an inspection through properly-qualified officials, that it is carried out in all ranks of society in a thoroughly efficient manner.

Manual of Hypodermic Medication. By DRS. BOURNEVILLE AND BRICON. Translated from the Second Edition, with Additions by ANDREW S. CURRIE, M.D. London: H. K. LEWIS. 1887.

Dr. Currie has done good service in giving us a translation of this book, as it is most desirable that English readers should be made familiar with foreign works, that have been well received in their own country.

There is first a most meagre history of the hypodermic method and a short account of the various syringes, &c., that have been used in the procedure. The main part of the book consists of a list of drugs, in alphabetical order, giving the various preparations and doses that have been used, and the conditions in which they have been found serviceable. Some useful tables (including the growingly popular, but almost pernicious, "Index of Diseases") and a good index are appended.

The book is not a mere translation of the work of Drs. Bourneville and Bricon, as Dr. Currie frequently interposes comments of his own, based upon personal experience or culled from his research. Both authors and translator seem to have ransacked literature to find and chronicle every hypodermic "fad" of enthusiastic therapeutists. Much of this might have been omitted with advantage to the reader, and in the interests of the book itself. The excellent practice of subcutaneous medication is likely to suffer when we are gravely told by the authors of the use of "sulphate of magnesia (1½ grain in 16 minims of distilled water) by the hypodermic method, and the purgative effect was produced," or when the translator leads us to infer that, in a case of cancer of the uterus, the hypodermic use of a sedative gave relief for ten or fourteen days at a time.

The book, however, is one that all those should have who wish to know of what this important branch of therapeutics is capable.

The Intestinal Diseases of Infancy and Childhood. By A. JACOBI, M.D. Detroit: GEORGE S. DAVIS. 1887.

This is one of the best—perhaps, taken altogether, the best—of the many books written on the feeding of young children, and the troubles connected therewith.

It differs from most of its congeners, in being marked by much originality and daring. The author has no regard for ancient fictions or, as some people call them, beliefs; he brings everything to the test of the touchstone of modern experience, and that mostly his own. Dr. Jacobi is a keen observer, and about the most trustworthy of the counsellors who proffer advice in this often difficult question of artificial feeding.

Mothers and nurses have been long encouraged by doctors to feel themselves secure in the idea—delusive more often than not—that their children were being fed with milk from a single cow. A milk-boy, asked by one of his fellows why he was filling a small can from his large one, replied, "The lady at No. 10 always has the milk from one cow." Dr. Jacobi says, "The baby fed on the milk of one cow is, as it were, an appendage of that cow, and dependent upon the animal, and the practice of relying on the milk of one cow is inferior to making use of the mixed milk of a whole dairy."

The author speaks somewhat disparagingly of condensed milk, allowing it only when the choice is between that and bad milk. Instances of the benefit and comfort of using condensed milk must, however, be familiar to every practitioner.

Whilst there are many children who seem to thrive upon almost anything, there are a large number with whom nothing appears to agree for long together. Here again Dr. Jacobi is most helpful. But he is scarcely emphatic enough about the virtues of peptonised milk, merely saying: "Fairchild's method of peptonizing milk is generally understood all over the country, and is widely appreciated." Contrary to the usual belief, he states that "some starch is digested at the very earliest age." His observations about the employment of patented foods are charmingly outspoken and intelligent.

Rather more than the latter half of the book is taken up with the account and treatment of definite intestinal disorders. Here the reader will find much valuable advice.

We recommend Dr. Jacobi's book very heartily.

Fever: a Clinical Study. By T. J. MACLAGAN, M.D. London: J. & A. CHURCHILL. 1888.

Dr. Maclagan has above all things the pen of a ready writer, and this book forms no exception in respect of quality to his previous publications. It is so pleasant to peruse a book whose grammar is irreproachable, and style attractive. In the space of something over 160 pages, Dr. Maclagan enunciates his theories and views upon fever, its causes, phenomena, and treatment; gliding with easy confidence over the choppy seas—so to speak—caused by the conflicting currents of knowledge, half-knowledge, and ignorance. He gives with moderate fulness the views of others on fever, such as Virchow, H. C. Wood, Miller Ord, Hale White, and, still more recently, Macalister; in order, however, to dissent from them, more or less. He quotes with approbation only Jenner, writing more than thirty years ago. Without attempting to give Dr. Maclagan's own views on fever, an epitomised idea of his position may be gathered from these brief quotations:—

"There is really no valid reason for supposing that during fever the mutual relation of heat-production and heat-elimination is materially altered."

"In all fevers the rise of temperature results from increased metamorphosis."

"Hyperpyrexia may be defined as paralysis of inhibition of metabolism; paralysis of heat-inhibition being only part of the process."

"There is not sufficient evidence to show that this special function (influence over heat-production) is localised in any one part of the nervous centres."

These sentences indicate a considerable divergence of opinion from the views of Dr. Macalister, or those expressed at the discussion on fever, at the American Physiological Society some months ago, which are those now most usually held.

Dr. Maclagan prefers the study of fever from the clinical side to that from the physiological or pharmacological side; but not much more can we hope to gain, now-a-days, from the clinical investigation of such a subject as fever, upon which purely clinical medicine has practically exhausted its resources. Physicians must look to the physiologists to further unravel its unexplained mysteries. In another edition we trust that the important researches of Sawdoski and Van Noorden into the action of antipyretics will be fairly considered, and the bearings of those investigations incorporated in the text.

The Operations of Surgery. By W. H. A. JACOBSON, F.R.C.S. Pp. 1136. London: J. & A. CHURCHILL. 1889.

To gather within the limits of one volume, however ponderous, an adequate account of modern operative surgery seems an almost impossible effort. Indeed, according to the ordinary limits of descriptive language, detailed and exhaustive accounts of all surgical operations could not be given in anything smaller than a cyclopædia. And such a detailed and exhaustive work could not be written by one man, for here experience would be essential, and few surgeons, from experience, are competent to speak authoritatively on more than two or three operations.

The task which Mr. Jacobson has set himself to perform is, while not of this exhaustive and encyclopædic nature, more ambitious than most men, single-handed, have dared to undertake. He traverses the whole range of operative surgery. For each operation he provides a description which, to the ordinary handicraftsman educated in anatomy and the principles of surgery, is sufficiently complete for work-a-day purposes. In language, method, and illustration the work is in every respect admirable. We consider, therefore, that Mr. Jacobson has succeeded in the task he has set himself, and that he has produced a work on operative surgery which, in width of scope and fulness of detail, has scarcely a rival in the English language. With judicious trimming, careful husbanding, and constant embellishment as the art of surgery advances, this work should hold a commanding position for years to come.

In respects not specially professional, the author has shown himself expert in scientific book-making. There is an excellent index; the arrangement and balance of material is simple, judicious, and harmonious; the language is clear and elegant; and the grammar and rhetoric are (rare observation in these days!) above reproach.

Epitome of Surgery. By RIDLEY DALE, M.D. Pp. 498. London: H. K. LEWIS. 1889.

It is rare indeed that synopses, or epitomes, or students' guides are worthy of commendation. In such works elision is usually made the substitute for condensation, and system and classification, the prime features in all works

intended as guides for the student, are either ignored or imperfectly carried out.

It has given us real pleasure to find an exception to these general rules. The work before us provides a really good synopsis of the leading principles in surgery; well-arranged, judiciously balanced, and tersely but clearly described. Printed in small type, two columns in the page, there is a large amount of information in the 500 octavo pages which go to form the book. The student should derive much advantage from the careful perusal of this work before presenting himself for examination.

Illustrated Lectures on Ambulance Work. By R. LAWTON ROBERTS, M.D. Pp. 206. London: H. K. LEWIS. 1888.

We have nothing that is not favourable to say respecting this little work. It seems very satisfactorily to fulfil the commendable object with which it was written; namely, to instruct the laity how best to deal with cases of emergency occurring in their midst. As a text-book to be used in the classes formed by the St. John's or other Ambulance Associations, it is sure to be popular and useful.

Hunterian Lectures on Tension, Inflammation of Bone, and on Cranial and Intra-cranial Injuries. By T. BRYANT, F.R.C.S. Pp. 146. London: J. & A. CHURCHILL. 1888.

If there is not much of novelty in this small work, it is all truth, and important truth that bears repetition and enforcement. Sound clinical precepts, supported by honest and enlightened practice, are by no means the least worthy means of perpetuating the memory of the great man in whose honour these lectures were delivered.

Lectures on Ectopic Pregnancy and Pelvic Hæmatocele. By LAWSON TAIT, F.R.C.S. Pp. 107. Birmingham: THE "JOURNAL" PRINTING WORKS. 1888.

It is characteristic of all Lawson Tait's work that it bears the visible impress of a strong and independent personality, and that it goes straight towards some definite practical end,

in complete disregard of preconceived theories or notions, and often through the ruins of them.

We regard Mr. Tait's practical work in the treatment of one phase of ectopic pregnancy as his best and greatest; and we have little hesitation in affirming that the future surgical historian will place it so. It is probable, perhaps certain, that more elaborate, learned, and even scientific treatises on the subject have been, and will be, written; but we doubt if any single man will ever again be able, in this walk of surgery, to speak of so many lives saved by operations which were as original as they were daring.

If we smile at, we can sympathise with the impatient contempt with which the practical man, dealing with the great issues of life and death, sweeps away the theories of the dissector and the student dealing with pickled specimens and inherited lore. No one has a better right to do this than Mr. Tait, and we must do him the justice to say that he makes full use of it. From the primal selection of its ectopic spot to the final death of the fully developed fœtus, there is not a question as to anatomy, diagnosis, or treatment in which Mr. Tait does not upset an opponent, or maintain an independent plan of treatment. The work is controversial throughout: it was bound to be so, for the proud position of Mr. Tait's thesis is established on the confutation of accepted doctrines. The two real strongholds of his position—the locality of the ectopic nidus of the ovum, and the necessity of operating at once on primary rupture of the sac—Mr. Tait has already fully established. Not content with establishing these positions, he attacks the enemy at all points, and if they refuse always to evacuate their strongholds, they must be conscious of feelings of considerable discomfort from the battering they have received.

An adequate idea of the contents of the book could scarcely be given even in a long summary; and such summaries, at their best, are nearly always unjust to the author. To learn its lessons our readers must read the work. It will repay the trouble.

Diseases of Women. By A. H. N. Lewers, M.D. Pp. 400. London: H. K. Lewis. 1888.

Whatever just cause of complaint women may have as to their being overlooked in suffrage, science, art, or matrimony, they certainly cannot complain that they are neglected as to their diseases. Was this book wanted? Does it fill a void,

narrow or gaping? While American and German specialists are sending forth large original works, and even encyclopædias, on the diseases of women, English specialists seem to content themselves with pouring forth numerous small works, abstracted, condensed and modified from the originals.

Although we believe that Dr. Lewers would have been doing more for science and his own reputation by thoroughly and exhaustively working out one feature of one disease, than by superficially traversing the whole field, we must admit that this work is, on the whole, well done, and worthily occupies its place in Lewis's Practical Series.

Displacements of the Uterus. By Dr. B. S. SCHULTZE. Translated from the German by JAMESON J. MACAN, M.R.C.S., and Edited by ARTHUR V. MACAN, M.B. Pp. 378. London: H. K. LEWIS. 1888.

We gladly welcome this excellent translation of Schultze's valuable and original work. As a scientific and exhaustive exposition of the pathology and treatment of uterine displacements the work stands alone and unrivalled. It is abundantly and excellently illustrated with *original* woodcuts; it is admirably printed and got up; and in every respect appears, in its English dress, as the worthy and even flattering counterfeit of its German original.

Reports from the Laboratory of the Royal College of Physicians, Edinburgh. Edited by J. BATTY TUKE, M.D., and G. SIMS WOODHEAD, M.D. Vol. I., 1889. Edinburgh and London: YOUNG J. PENTLAND.

We heartily welcome this first volume of Reports from the laboratory recently established by the Royal College of Physicians of Edinburgh, not only on the ground of the excellence of the material it contains, but also because it signalises a new departure in the history of a great corporation, which is destined not only to benefit the profession, but to serve as an example to other corporations. We sincerely congratulate the Edinburgh College of Physicians on the success of their effort. We scarcely know which to praise most: the skill and acumen with which the laboratory has been fitted up; the small expense it has involved; or the great principle it has put into practice. This laboratory will

certainly be a notable increment to the educational influence of Edinburgh as a medical centre.

Alas! that by comparison, congratulation and encouragement should suggest depression and condemnation! Here are we in England observing a small and comparatively poor corporation in Scotland founding a laboratory; encouraging and partly endowing research; educating individuals, and advancing science; while we see our greatest corporation, the curators of the finest museums in the world, recently endowed with enormous wealth, crushing popular demands, spending its revenues in legal enforcement of foolish claims, and contemptuously setting aside the clamours of thinking and working men for the establishment of laboratories and the encouragement of research.

The Causation of Disease. By HARRY CAMPBELL, M.D. Pp. 308. London: H. K. LEWIS. 1889.

At the outset one is not prepossessed in favour of a writer dealing with advanced philosophy who quotes (p. 52) Tennyson as saying: "In the spring a livelier iris brightens on the wing of dove," instead of "changes on the burnished dove;" who uses throughout the work "ante-partem" to express what we mean by "ante-partum;" and who makes numerous similar mistakes which can scarcely be misprints. "Creighton Brown" for Crichton Browne (p. 52) is an error as much in courtesy as in spelling.

On the first page we are startled with the query "What is the cause of O uniting, or, in simpler language, *why* does O unite with H in the proportion to form water?" It is not oxygen and hydrogen, but O and H. Environment is E, structure is S; and E and S play very important parts in this work. Medical observations are not numerous, but some of them are worthy of notice. For instance, discussing whether there is a monthly rhythm in the male sex analogous to that in the female. He says: "I have met with a case of monthly-bleeding piles in an elderly gentleman; and it is a very interesting fact that when, at the age of sixty-six, the hæmorrhagic flux became irregular, this gentleman experienced many of the symptoms which women complain of at the climacteric—he became emotional, and, among other things, suffered from very marked flushings, headache and backache, and a symptom which I have never yet found absent from among these menopausic *(sic)* patients who seek medical relief—*soreness of the scalp*."

We have read the book from beginning to end, not without interest, occasionally with advantage to our mind, but sometimes to the detriment of our temper. The author has an original and philosophic bent, and presents many facts in suggestive lights and sequences. But a more intimate acquaintance with Bain and Mill and Spencer and Darwin than our author possesses is necessary for a man who enters on a philosophic disquisition on the causation of anything biological; and an extended clinical experience in addition is essential for the satisfactory consideration of the causation of disease in particular. The work is suggestive and interesting: if Dr. Harry Campbell waits for twenty years of clinical experience, and in the meantime studies philosophy in general and the logic of causation in particular, he may provide us with a work of some value.

Massage, and Allied Methods of Treatment: an Abstract of Lectures to Trained Nurses and Masseuses. By HERBERT TIBBITS, M.D. Pp. 142. London: J. & A. CHURCHILL. 1888.

Within the scope permitted, and before the audience specially addressed—trained nurses,—these lectures must be regarded as successfully fulfilling their aim. The author's "design has been to cordially recognise all good work all over the world upon the subjects upon which he lectured; and not to arrogate to himself the position of *the* sole high priest of massage." We are glad to know this; and knowing it, our commendation of Dr. Tibbits' work is none the less hearty. Although these lectures were specially prepared for trained nurses and masseuses, they may be perused with pleasure and profit by trained and cultured medical men.

The Year-book of Treatment for 1889. Pp. 344. London: CASSELL & CO.

We gladly welcome this very useful *multum in parvo*, collecting, abstracting, and reviewing the most important medical writings *of* 1888—*for* 1889, as stated.

We have already stated our objections to abstractors being at the same time reviewers; and in this respect we have placed another medical annual ahead of the one before us. We should like to see an editor over all who was at the same

time a competent grammarian, and who would ruthlessly deal with slipshod or ungrammatical English, and see that punctuation was attended to. Only a minority of the contributors sin in this respect; but their sins are very heinous. In these stirring times the following sentence comes with an effect that is at once reassuring and delicious:

"The year just past has in one sense been an uneventful one for those who are specially interested in diseases of the throat and nose."

The philosophic calm which a mental pre-occupation in nasal and throat matters would seem to beget is just what is wanted in this harassed age.

A Manual of Ophthalmic Practice. By CHARLES HIGGENS, F.R.C.S. London: H. K. LEWIS. 1888.

This small manual—one of Lewis's Practical Series—consists of 300 pages, and contains a digest of ophthalmic surgery, divided into three equal parts: 1st, Examination of the eye, optics and refraction; 2nd, The diseases of the eye and their treatment; 3rd, Operations. The author is very well qualified by his large experience to deal in a practical manner with the subject; and it is interesting to gather his views, especially as regards treatment. In the space allotted there is little room for pathology or for theory; and it is difficult to see how the book fills any want in ophthalmic literature.

It can scarcely be looked upon as a sufficient handbook for the practitioner of medicine, or as a satisfactory student's manual.

The Medical Annual. 1889. Bristol: JOHN WRIGHT & CO.

We have pleasure in calling attention to and in commending this useful work. Its special features are the alphabetical arrangement of matter; the therapeutical synopses and reports; the very full bibliography at the end of each article; and last, but not least, the fact that the authors of the abstracts have modestly kept themselves and their opinions in the background, and have let the works quoted speak for themselves. There are one or two noteworthy exceptions, and these are mostly commendable. We would specially refer to the article by John W. Taylor, on the Diseases of Women in relation to dress, in which there is much suggestive and novel matter.

Notes on Preparations for the Sick.

Prof. Dr. Kemmerich's Preparations of Beef.—F. W. Berk & Co., London.

We have received samples of these excellent preparations. Chemical analysis shows that they are of the highest nutritive value, and are superior to other well-known meat-extracts.

The **Extract of Beef** is richer in nitrogen than any other similar extract: it contains 7.86 per cent. of soluble albumen, and 18.24 of salts, chiefly phosphates with potassium.

The **Peptone of Beef**, according to an analysis by Dr. Clark, of Glasgow, contains 35.10 per cent. of peptone, with 11.25 of soluble albuminoids. It is readily soluble in hot water, and the solution has an agreeable flavour. The nutritive value of peptones, and the fact that they require no digestion, are too well known to require comment: all authorities agree as to the large proportion of nutritive matter in these preparations, which are manufactured from the best of raw material at Santa Elena, in the Argentine Republic. They are both of the highest value in the treatment of the sick, not simply as occasional stimulants and restoratives, but because they supply good nitrogenous pabulum for the renovation of nitrogenous tissues, and in a most agreeable form which any invalid can take, even when other food cannot be swallowed or digested. The beef peptone is also very suitable for administration by enema when rectal feeding is desirable or necessary.

Soden Mineral Pastilles.—The Soden Mineral Produce Company, London.

The value of the medicinal springs of Soden, in the Taunus, has long been recognised: these pastilles provide the entire benefit of the Taunus waters to those who cannot afford a long journey and an expensive sojourn in foreign hotels. They are found to be of value in catarrhal affections of the throat and air-passages, and are much appreciated by those patients who have given them a trial.

Tabloid Triturates.—Burroughs, Wellcome & Co., London.

These tabloid triturates are creating a demand, founded upon the following advantages:—

1. Absolute purity and uniformity of the drug.
2. Absolute accuracy of dosage.
3. They offer the most pleasing and palatable form for the administration of the nauseous drugs usually prescribed in the form of tinctures or powders.

We have found them of much service to patients who cannot be induced to swallow any medicine in form of pill or mixture, and to those who require frequent doses, which can be carried in the pocket and easily swallowed.

Sozoiodol-Salts.—Frederick Boehm, London.

We have received samples of some of these, viz.:—

Potassium	Sozoiodol.
Sodium	,,
Zinc	,,
Mercury	,,

Sozoiodol—which is spoken of as "an odourless substitute for iodoform"—is a compound of three powerful antiseptics, in the following proportions:—

Iodine, 52 to 54 per cent.
Carbolic Acid, 20 per cent.
Sulphur, 7 per cent.

It is itself comparatively insoluble; but its salts dissolve easily, and have been found to be of therapeutic value, both locally and internally. We have given it in doses of ten grains three times daily, in a case of phthisis with intestinal ulceration, and it gave rise to no evidence of irritation.

Cream of Malt. Liq. Caulophyllin et Pulsatillæ Co.—Oppenheimer Bros. & Co., London.

The first of these compounds, miscible with water in all proportions, is described as a chemical mixture of malt, cod-liver oil, and hypophosphites, which will be retained by the most delicate stomachs, even when other preparations of malt and cod-liver oil are rejected. Most patients take it well, and some prefer it to all other cod-liver oil mixtures;

but there are others who prefer the pure oil, and appear to digest it without difficulty.

The second preparation—described as "the new uterine tonic and restorative"—is said to exert its power principally over the kidneys, bladder, ureters, urethra, uterus, and vagina, and to stimulate the assimilating organs. There is some evidence in favour of its utility; and it has created for itself a very considerable demand in the treatment of irregular, painful, suppressed, and excessive menstruation, a class of chronic disease for which we cannot have too many drugs for alternate or occasional use.

Antiseptic Dressings.—JOHN MILNE, London.

We have received an assorted series of specimens of these well-known and excellent antiseptic dressings.

Surgeon Ulick Bourke's First Field Dressing, consisting of alembroth absorbent cotton-wool, gauze, and bandage, with a little levigated iodoform, seems to be admirably suited for the purpose. The cardboard box in which the dressings are contained adds considerably to the bulk, and would easily get broken.

Glycerine and Codeia Tablets.—J. MORTIMER, Clifton, Bristol.

These convenient tablets contain one-eighth of a grain of codeia in each. They are likely to be useful in coughs of all kinds, more especially in the treatment of phthisis. We have ascertained that—unlike many glycerine jujubes so-called—they do not contain any sugar, and therefore are unobjectionable in cases of diabetes, where all the usual cough syrups are inadmissible. They form an easy and convenient method of administration of codeia in small doses for diabetes, and where the disease is accompanied by chronic lung disease are of the greatest value.

Cascara Sagrada, Hawley (in Capsules). — EVANS, LESCHER, & WEBB, London.

Mr. J. T. LONG, of the Hotwells, Bristol, sends us some of these.

Cascara capsules, by various makers, are now well known, and are much liked by those patients who require a gentle

stimulant to peristaltic action. One taken regularly each night, or in some cases two in the day, will usually suffice to counteract chronic constipation. They are easily swallowed, and the nauseous taste of the extract is not perceived. Each capsule is equivalent to half a drachm of the fluid extract of cascara sagrada.

Wood Wool Preparations.—The Sanitary Wood Wool Company Limited, London.

There is no doubt that wood-fibre is, even under great pressure, one of the most absorbent of materials. It is also comparatively cheap. These attributes would make it suitable as a surgical dressing if the individual fibres were longer and the bulk more coherent.

To accomplish the latter object a quantity of ordinary cotton-wool is added, and the mixture forms a soft, elastic and highly absorbent material very suitable for a surgical dressing.

PERISCOPE.

MEDICINE.

Weil's Disease.—At a recent meeting of the Society for Internal Medicine, in Berlin, Professor A. Fraenkel brought forward a case of this disease. A medical student received, in a duel, a cut over the right frontal protuberance. Thirty-six hours after, when the wound had apparently healed by first intention, rigors set in, and the temperature ran up to 104° F. About forty-eight hours later, a redness about the size of a shilling appeared in the neighbourhood of the wound, disappearing after two days. The fever continued, and patient became restless, sleepless, and delirious; then jaundice appeared, with coated tongue, diarrhœa, with biliary pigment and albumen in the urine. Nine days later, a gradual rise of temperature to 103° F. occurred, with a corresponding gradual fall, while the convalescence took several weeks. This disease was first described by Weil two years ago, in four cases. Its chief symptoms, which are well seen in Fraenkel's case, were given thus:—Strong, well-built men are suddenly seized with rapidly increasing fever, great weakness, unquiet sleep, with tendency to somnolence and delirium; moderate jaundice soon occurs, with enlargement of the liver and spleen; albuminuria, coated tongue, and diarrhœa. This condition, with temperature to 105.5° F., lasts 6—8 days, the temperature then falling slowly to the normal. After a pause of 1—7 days, the temperature rises gradually, and by degrees falls again. Great prostration remains, and the convalescence lasts several weeks. When jaundice is present, bile colouring matter and biliary acids, blood-corpuscles and casts appear in the urine, and the motions are colourless. Weil considers it to be an absorption jaundice. The differential diagnosis lies between it and acute yellow atrophy of the liver, relapsing fever and some cases of typhoid. The state of the liver and the absence of a spirillum in the blood distinguishes it from the first two respectively; but in some cases of bilious typhoid the diagnosis is occasionally difficult. Weil looks upon the dis-

ease as a general affection caused by infection or intoxication, with consecutive swelling of the abdominal organs and their cellular elements. The origin of the virus is probably in the intestine. Fraenkel holds it is a form of septic infection, the place of inoculation differing in different cases. A. Baginsky related a case in a child thirteen months old; and Bartels agreed with Fraenkel in viewing the disease as of septic origin.—*Berliner klinische Wochenschrift*, No. 4, 1889.

Rumination, or Merycismus.—Researches into the etiology of this rare disease—only a hundred cases of which have been observed since Fabricius first described it, nearly three centuries ago—have been directed more particularly, of late years, to the examination of the stomach-secretions, in the hope that a chemical basis might explain the peculiar train of symptoms and furnish some indications for a rational treatment of the disorder. So far, however, the only constituent of the gastric fluid found to vary is the free hydrochloric acid; but to what extent this is to be looked upon as an etiological factor may be gathered from the following cases, recently published:

Dr. Alt gives a case from the "Nerven Klinik" of Professor Hitzig, of Halle (*Berliner klinische Wochenschrift*, Nos. 26 and 27, 1888). The patient was a man, 24 years old, who had suffered from his 10th year from regurgitation of food. At seven years of age he suffered from severe headaches, which affected his memory; and two years later, from chronic stomach-catarrh. His chief symptom was regurgitation of food or drink after a longer or shorter time, varying from a few minutes to many hours, or even days, after swallowing; it was then chewed thoroughly and re-swallowed. The food was usually bolted the first time: if he chewed it to any extent, it returned again, in a pulpy state, and tasted badly. His hunger was not appeased until after the second mastication; and if the interval between deglutition and regurgitation was at all long, he suffered from a feeling of pressure over the stomach and pyrosis. He attributed the disorder to swallowing large quantities of fruit untouched: thus, cherries swallowed whole were, after regurgitation, masticated and the stones spat out. Return of the food could not be readily induced; but sometimes, by inspiring very deeply and holding the breath, it succeeded. The patient appeared poorly nourished and had a furred tongue. There was a moderate degree of dilatation of the stomach, all the other organs being normal. A test-meal, consisting of soup, beef-steak, potatoes, bread, and some water, he was able to repress for five hours, during which he had increasing hunger

and burning pain in the stomach. A tube was introduced with ease, and the stomach-contents removed and examined. These formed a thickish food-pulp, reacting strongly acid, giving the HCl action markedly, but containing no lactic acid; whilst it showed effective digestion of proteids and very little alteration in starchy food. Hyperacidity was present. To test some of the patient's statements and prove the deficient closure of the cardiac end of the stomach, the patient, after the stomach had been washed out, swallowed quarter of a litre of water containing two living gold-fish of 6½ and 5½ cm. in length: the fish could be heard splashing about in the stomach by applying the ear to the abdominal wall; twenty minutes afterwards, the larger gold-fish was returned into the mouth without any fluid, and fell into a vessel of water, in which it swam about very actively; eight minutes later, the smaller one was brought up in a similar way, apparently none the worse. Alt looks upon the hyperacidity as the essential factor. He says that in all the recorded cases the patients bolted their food; its admixture with the saliva being slight, the alkalinity was soon neutralised; a great quantity of acid being secreted, hyperacidity resulted; this stimulated peristalsis of the stomach-walls, and the cardiac end, being deficient, allowed the food to return into the mouth, where it was thoroughly mixed with the alkaline saliva, which neutralised the hyperacidity and allowed digestion of starch to go on. Treatment was adopted according to this view. There was a systematic emptying of the stomach of the undigested starch: a meal was given with proteids preponderating; while alkalies, especially carbonate of soda, were administered. In addition, the lower end of the œsophagus was galvanised by the introduction of a sound. This treatment gave great relief in 14 days; and two months after, patient was free from his former trouble.

A different alteration obtained in the stomach-contents in a case reported by Boas (*Berliner klinische Wochenschrift*, No. 31, 1888.) In this case, a man, ætat. 29, a slight but typical rumination developed a short time after an attack of acute gastritis inhis 18th year. Under the influence of dietetic errors and irregular habits, it became more pronounced and occurred oftener, gradually producing headaches, feeling of fatigue, incapacity for continuous work, depression, and latterly emaciation; objectively there was a high degree of hyperæsthesia of the abdominal walls, loss of patellar reflexes, marked sensibility to pressure over epigastrium; the stomach was of normal size, and the cardiac end was capable of closure. Regurgitation took place usually about a quarter of an hour

to one hour after deglutition. The regurgitated food always tasted agreeably sweet, the patient ruminating openly with great pleasure. Chemical examination, carried out for three weeks, showed considerable decrease of free HCl. Twenty drops of pure HCl were given during every meal, and led to some improvement in the symptoms.

Still otherwise was the condition of the stomach-contents in two cases recently communicated by Jürgensen of Copenhagen. In the first case—a man 23 years old, no heredity and no nervous history—the affection began, two and a half years previously, by hiccough; then pieces of meat came up, followed soon by a development of the rumination during every meal. He had neither nausea nor dyspeptic symptoms. Repeated examinations after test-meals showed an entire absence of free HCl. Daily washing out of the stomach and the artificial introduction of food had but little influence on the course of the disease. His second case was a girl, aged 20, whose father and grandfather ruminated. When 10 years old, she began suddenly to ruminate. Regurgitation came on immediately at the close of a meal—sometimes even during its course, if a pause was made. There was no nausea, but a peculiar giddy feeling. All kinds of food rose up: milk, however, was best retained; while eggs, coffee, and fats were but a short time held down. There was an absence of free HCl in stomach-contents. The introduction of food by a tube into the stomach gave some slight relief, but the rumination soon set in again.

In all those cases the stomach-contents were of different chemical conditions—hyperacidity, subacidity, and want of acidity occurring in individual cases. From these facts, Boas believes that the affection is probably a stomach neurosis, and concludes that the chemical state of the mucous membrane of the stomach is not at all an essential factor, but merely an accidental occurrence in the complex of symptoms.—*Berliner klinische Wochenschrift*, Nos. 26, 27, 31, and 46, 1888.

D. R. PATERSON, M.D.

THERAPEUTICS.

Myrtol.—This substance, which is a clear liquid of pleasant odour, is strongly recommended by Professor Eichhorst, of Zurich, in diseases of the respiratory tract, as a powerful disinfectant and deodorant. It is best administered in the form of capsules. In putrid bronchitis and gangrene of lung, a deodorising and disinfectant influence is obtained by the administration of 2—3 capsules every two hours; care

being taken when three are given, owing to the tendency of loss of appetite to be produced. The action is, not infrequently, very rapid, a few capsules causing the disappearance of the horrible smell from the breath and expectoration. The quantity of expectoration decreases very rapidly; while in several cases which Eichhorst saw, cure resulted. Myrtol has no action on the tubercle-bacillus; for in a case of gangrene of lung, in which recovery took place, the bacilli appeared in the sputum notwithstanding the continued use of the drug. —*Therapeutische Monatshefte*, Heft i., 1889.

Iodol in Internal Diseases.—Cervesato of Padua, after an extended trial of this drug in various diseases, gives the following results in cases where he has found it useful:—

I. **In Scrofula.**—Its action is best seen in the torpid form, especially where the glandular swellings have not yet suppurated; to a lesser degree it was useful in strumous appearances of mucous membranes, especially of the nose and throat: it was least active in scrofulous dermatitis, as impetigo and eczema. Iodol was used in daily doses of 7—20 grains, according to the age of the child, for a period of 2—3 months. This was supplemented, in chronic adenitis, by the inunction of iodol ointment (one part iodol to fifteen parts vaselin); or insufflation of the powder, in cases of catarrh. It was well borne, causing no digestive disturbances.

II. **Diseases of Respiratory Organs.**—It is here given in 15—45 grains, and also by inhalation and insufflation. In advanced cases of lung tuberculosis with extensive cavities, there was no influence seen; but where there was primary laryngeal tubercle, a distinct improvement was noticed. It was useful in acute and subacute laryngitis, as insufflation. In a case of extensive catarrh of the smaller bronchioles, with recurring asthmatic attacks, internal use, together with inhalation, gave great relief. In two children with dry bronchitis, there was a profuse secretion following its action, affording great benefit; while in three cases of stationary pleural effusion in children, rapid absorption followed administration of the drug.

III. **Tertiary Syphilis.**—In two cases of gummata of the throat, the internal use of 30—45 grains daily, as well as local application, led to cure in two months. The local solution used was: iodol, 1; alcohol, 16; glycerine, 34. A case of tertiary syphilis, which affected the larynx and the liver, rapidly yielded to it.

Iodol is well borne; it has no influence on the body temperature, on the circulation or respiration, and it does not produce iodism.—*Berliner klinische Wochenschrift*, No. 2, 1889.

Sozoiodol.—Nitschmann confirms the favourable results obtained by the use of the soda preparation of this salt by Fritsche in affections of the naso-pharynx; instead, however, of insufflation, he has used it in the form of a solution, 5—7 per cent., applied with a brush. Langgaard has already shown its powerful action on germ-formation; while at the same time it is entirely free from any poisonous effect, which makes it useful in large abrasions of the surface. Nitschmann found it particularly useful in wounds where there is a good deal of suppuration; as in injuries from machinery, sloughing from molten metal, superficial burning, chronic ulcers of the leg, etc. It was much superior to iodoform in cases where the granulations were exuberant, and where there was free suppuration. The ointment of the soda preparation rapidly cleanses the wound, and keeps down the granulations. Comparing it with iodoform, in two cases of superficial burn of almost the same extent, he found that the one treated with sozoiodol healed twice as fast. It is used in the following form:

Sozoiodol Natr. ... ... 4 pts.
Lanolin ... ... 40 pts. Ft. ung.

In acute pharyngitis, as well as in acute stomatitis, a watery five per cent. solution of the zinc preparation, brushed on every two hours, acts quickly. In conjunctivitis purulenta and blenorrhœa neonatorum, a lotion like the following acted very well:

Sozoiodol Natr. ... ... 2 pts.
Aquæ ... ... 30 pts.

Zinc preparations cause burning pain. In gonorrhœa it is useful as a two per cent. solution, and in vaginitis it may be applied as an ointment on a tampon; but the disease, *par excellence*, for which it is to be recommended is catarrh of the cervix. Here it is used in the form of a powder. The cervix is laid bare with a speculum, and the powder is blown in through a glass tube, with indiarubber tubing attached to it. A dry tampon is then laid into it, to prevent the rapid solution of the substance. In cases of endometritis, a seven per cent. solution was injected into the uterus by means of a Braun's syringe, care being taken to withdraw the greater part of it after a short time, in order to avoid the fluid entering the tubes. Some improvement followed this. —*Therapeutische Monatshefte*, Heft. i., 1889.

Toxic Effects of Antipyrin.—Müller (*Schweizer Correspondenzblatt*, No. xviii., 1888) observes that after the use of this drug, not only does the expected action sometimes fail, but symptoms appear which are to be regarded as due to some influ-

ence on the nervous system: thus, exanthems of different forms and bleeding from the mucous tracts appear, complicated often by grave head-symptoms—coma and convulsions—and also attacks of heart-failure. On the other hand, a contrary effect is sometimes observed: neuralgic pains are increased, and become unbearable, while a slightly febrile temperature may rise some degrees after its use. In these cases, the continued administration may induce serious symptoms: thus, Müller had a case of joint-rheumatism in a ten-year-old child, where a single dose of 3—4 grains of antipyrin raised the temperature, and two or three more doses brought on brain-symptoms, heart-weakness, &c. These cases may be due to some idiosyncrasy.

Rapin of Geneva (*Revue Médicale de la Suisse Romande*, No. 11, 1888) reports a case where alarming symptoms occurred after a dose of 15 grains. The patient, aged 28, had taken the same dose several times before, for sciatica, and as relief followed, it was discontinued for five days. Scarcely had she taken it again, when violent burning pains in the stomach, vomiting, and collapse set in. The lips were cyanotic, the pulse small and rapid, so that the supervention of death was feared. Some hours later, an itching rash appeared over the whole body. Twenty-four hours afterwards patient was quite well. In two other patients (arterio-sclerosis, with angina), Rapin saw death occur after the use of 15 grains of antipyrin.—*Therapeutische Monatshefte*, Heft i., 1889.

On the Therapeutic Effects of Washing out the Stomach in Infancy.—Leo gave his experience before the Berlin Medical Society in this mode of treatment—first proposed by Epstein—in 104 cases. He used pure water alone, or with the addition of a few drops of a 20 per cent. thymol solution; and the effect, in all cases beginning with vomiting, was most striking. The vomiting disappeared completely, or was greatly lessened. In acute dyspepsia, with or without vomiting, a single washing-out often sufficed to cure it. The result in cholera infantum was not so marked; but in some cases it was of use, especially when combined with calomel and opium. In other cases of chronic and subacute stomach-catarrh, as well as in simple and sometimes even in extreme cases of diarrhœa, good effects were seen. A. Baginsky agreed with Leo in the good results to be got from washing out the stomach. He considered it contra-indicated in cases where there is grave inflammatory irritation of the bowels with high fever, great pain, and danger of peritoneal complication, as well as in cholera infantum after collapse has set in. It is, however, a sovereign remedy

in habitual vomiting after ablactation—the most intractable cases yielding to it. In atonic conditions of the stomach and intestinal tract in rachitic children, this treatment is of great use. Simple water is quite effective; but in washing out the intestine, NaCl solution should be used, as the mucous membrane is very sensitive. Monti has shown that washing-out of the intestine is effective in affections high up in the canal, as seen in its effect on catarrhal jaundice. Professor Henoch endorsed this treatment. In most cases he obtained decided results; the introduction was easy, and he never saw any danger arise from it. Klein used the treatment in 30 cases of infantile cholera, making use of an ordinary funnel and catheter, with good success.—*Berliner klinische Wochenschrift*, Nos. 48 and 49, 1888. D. R. PATERSON, M.D.

Phenacetin.—In experiments on animals, phenacetin has been found, in doses of one gramme per kilogramme of the body-weight, to lower the temperature 1° C. in eight hours; double this dose has been given without producing toxic effects. Given in doses of 15—30 grains to a healthy man, it produces no effect on the temperature; given to a fever patient, it lowers the temperature in about 30 minutes. Its maximum effect is produced one hour or one and a-half hours after ingestion, and the mean duration of its action is four hours. It is said to produce no bad effects—neither cyanosis, like antifebrin, nor cutaneous eruptions, like antipyrin. Vertigo and shivering sometimes occur when the dose exceeds gr. xxx. —xlv. in twenty-four hours (Dujardin-Beaumetz). It has no effect on the pulse and respiration, and it is eliminated by the urine, the quantity of which is a little diminished during its administration. It has proved itself an efficient antipyretic in malarial fevers, pneumonia, acute rheumatism, and enteric fever; it is an excellent analgesic in neuralgia, and in painful affections in hysterical patients. It has been used with success in polyuria of nervous origin, but has no influence on diabetes. Dose as antipyretic gr. v. every four hours to commence with. Dose as analgesic, gr. viii.—x. It is best given in powder or capsule, or, in the case of children, mixed with the food. It is almost tasteless; is very insoluble, but dissolves in alcohol, ether, acetic acid, and sparingly in lactic acid at 30° C. This last reaction probably explains its solubility in the stomach.—*Le Progrès médical*, December 29th, 1888.

[I have used phenacetin in a large number of cases: it is an excellent antipyretic, rarely giving rise to toxic effects. The above statements, that it never gives rise to cyanosis or affects the pulse, are too absolute. In two cases of enteric

fever it had to be discontinued (moderate doses only had been given), on account of shivering, cyanosis, and depression of pulse. It produces abundant perspirations, but not so copious as in the case of antifebrin. As a practical point, I found that in patients with enteric fever, complicated with much bronchitis, a smaller dose than usual was generally efficient in reducing temperature. It is a valuable analgesic, and may give relief when antipyrin has failed; it is, however, not so efficient as the latter in megrim.]

Treatment of Tabes Dorsalis by Suspension.—M. Charcot has lately made some observations on the treatment of tabes dorsalis, and of some other nervous diseases, by the method of suspension originally advocated and carried out by Dr. Motchoukowsky, of Odessa, in 1883.

The plan of treatment consists in the suspension of the patient by the help of the apparatus used in putting on a Sayre's plaster-of-Paris jacket. At first, the patient is suspended for half a minute, and afterwards for half a minute longer on each occasion until a maximum period of three or four minutes is reached. It is well to raise the patient's arms every 15 or 20 seconds, in order that more effectual traction shall be exercised on the spinal column.

Out of 14 patients thus treated, remarkable improvement took place in eight: all the cases were undoubted instances of tabes dorsalis.

An analysis of the results obtained shows that improvement in walking, when inco-ordination exists, takes place from the first, lasting at first only two or three hours; but after eight or ten suspensions, remaining constant. After about 20—30 sittings, Romberg's symptom disappears. Disorders of micturition next show improvement; and with this lightning-pains are ameliorated, decreasing in intensity and coming on less often. If there is impotence, sexual desire and power of erection return after a time. Anæsthetic areas often disappear, sleep is better, and the general state of health improves. Improvement generally advances *pari passu* with the duration of treatment. In one severe case, in which the disease came on at the age of 32, no benefit was obtained. In none of the cases did the knee-jerk return, nor did the pupillary symptoms alter.

In two cases of neurasthenia, sexual power was regained: in a case of disseminated sclerosis, the treatment appeared to do harm; for after two suspensions, spasmodic paraplegia came on and lasted for three days.

M. Charcot concludes that further experience is necessary to determine the value of this method of treatment, but that

the results obtained during the three months are most encouraging in a disease for the relief of which we have hitherto been able to do so little.—*Le Progrès médical*, January 19th, 1889.

Action of Strophanthus.—M. G. Sée recently read before the Academy of Medicine the results of experiments made with strophanthine, an alkaloid of strophanthus. The animals experimented on were rabbits and dogs; the dose employed was 1½ milligrammes for the former, and 4 milligrammes for the latter. Soon after injection a more or less marked slowing of the heart, with rise of blood-pressure, takes place; this is followed by acceleration of the heart-beats. In the second period, which lasts until the heart ceases to beat, the cardiac action becomes irregular; short periods of acceleration are followed by more persistent periods of slowing, with abortive systolic contractions. The blood-pressure remains constantly high, but falls just before the end; sometimes a still further considerable rise of pressure occurs, with a sudden drop when the heart ceases to beat. This rise of the general blood-pressure was not affected by the changes in the force and frequency of the heart-beats; and further experiments showed that it was to be attributed to a direct action of the strophanthine circulating in the blood on the muscle-fibres of the arterial coats or on the nervous ganglia contained in them.

In man, strophanthine produced the best effects in heart-failure, in mitral regurgitation, or in simple dilatation of the heart from different causes: the pulse regained its regularity, dyspnœa ceased, and diuresis was set up. In disease of the aortic valves no good results were obtained, and in angina pectoris strophanthine was positively injurious. On the other hand, M. Sée found that the tinctures of strophanthus in common use were of little value, neither relieving dyspnœa, nor producing diuresis. Preparations from the plant, such as the tinctures, are very uncertain, and vary both in their physiological effects, and in the proportion of strophanthine—their only active principle—which they contain. He prefers, therefore, to prescribe the alkaloid, since the exact dose and the physiological action are then accurately known.

M. Dujardin-Beaumetz considered that, speaking generally, the use of the alkaloids was preferable to that of the extracts of plants; but in the particular case of cardiac remedies, the preparations of digitalis and strophanthus gave better results than digitaline and strophanthine. He had obtained excellent results from the administration of strophanthus in chronic diseases of the kidneys.

M. Constantine Paul and M. Bucquoy stated that stro-

phanthus was much to be preferred to strophanthine. According to M. Bucquoy, strophanthus increases the force of the ventricular systole and the amount of the urinary secretion. In lesions of the mitral valve with a failing left ventricle, it always relieves symptoms, and often re-establishes compensation. It is useful in aortic lesions when the ventricle begins to flag, and gives excellent results in Graves' disease. Strophanthus is well borne, does not accumulate, its action is speedy, and it can be administered for some time without losing its effects—which, indeed, often persist for some time after it has been discontinued. The only symptom of intolerance is diarrhœa.—*Gazette des hôpitaux*, November 15, 1888; January 17, 24, and 31, 1889.

Diuretic Action of Calomel.—The diuretic properties of mercurial preparations were known to the ancient writers Boerhaave, Paracelsus, Franck, and Hoffman; but appear to have been completely forgotten until Jendrassik recalled attention to them in 1886. Since then there have been numerous communications on the subject. Calomel produces good effects in anasarca when this is of cardiac origin. In the dropsy of albuminuric patients it is not so efficacious. In order that calomel may produce diuresis, the kidneys must be in good condition.

The following is the best method of administration: three grains of calomel are given three times a day for three or four days; it is then best to stop the drug, whether the desired effect has been produced or not. After a week a fresh trial may be made; if this also fails, the remedy is to be given up. Some authors have continued the administration of calomel for fifteen days; but this is imprudent, and may be dangerous. Toxic accidents are more likely to occur when diuresis is not obtained. At the end of two or three days, the action of the calomel may increase the quantity of urine secreted by 300 c.cc.; for instance, to a total of 3,000 or 4,000 c.cc. in the twenty-four hours. If the diuretic action does not show itself by the fourth day, it is not likely to appear later. Purgation often accompanies diuresis; the greater the purgation, the less is the diuretic action of the drug. When they are not excessive, the intestinal evacuations may obviously be of advantage. Salivation is to be carefully avoided: by the concurrent administration of a little opium, and the use of a chlorate of potash gargle from the first, the toxic effects of calomel can in most cases be obviated.—A. MATHIEN, *Gazette des hôpitaux*, January 15th, 1889.

J. MICHELL CLARKE, M.B.

SCRAPS

PICKED UP BY THE ASSISTANT-EDITOR,

Too Knowing.—Pompous physician (to patient's wife): "Why did you delay sending for me until he was out of his mind?" Wife: "Oh, doctor, while he was in his right mind he wouldn't let me send for you."—*The Medical and Surgical Reporter.*

Un dentiste qui a dû être vexé.—Une jeune dame souffrait affreusement des dents. Elle va chez un dentiste qu'elle ne connaissait pas et le prie de lui arracher la canine malade. L'affaire faite, dit le *Figaro*, elle place une pièce de 10 francs dans la main de l'opérateur. Celui-ci, trouvant ses honoraires un peu minces et regardant la pièce dédaigneusement: "Ceci est-il pour mon domestique?" dit-il. "Non, Monsieur," reprend la dame avec son plus gracieux sourire, "c'est pour vous deux!"—*L'Union médicale.*

"An Imperfect (?) Form of Massage."—Referring to "A Full Account of the System of Friction as adopted and pursued with the greatest success in cases of Contracted Joints and Lameness from various causes, by the late eminent surgeon, John Grosvenor, Esq., of Oxford, with observations on those cases to which it is most applicable by William Cloebury, Member of the Royal College of Surgeons of London, and one of the surgeons to the Radcliffe Infirmary, Oxford," Dr. William Murrell *(Masso-Therapeutics*, Fourth Edition, 1889, pp. 199—201) says: "Although published as recently as 1825, it is a comparatively rare work, there not being a copy in any of the medical libraries in London. . . . I cannot gather from the work itself whom he employed to carry out the requisite manipulations, but the following extract from 'The Black Mousquetaire' throws some light on the subject:—

'Oh, woman!' Sir Walter observes, 'when the brow
's wrung with pain, what a minist'ring Angel art thou!'
Thou 'rt a 'minist'ring Angel' in no less degree,
I can boldly assert, when the pain 's in the knee:
And medical friction Is, past contradiction,
Much better perform'd by a She than a He.
A fact which, indeed, comes within my own knowledge,
For I well recollect, when a youngster at College,
And therefore can quote A surgeon of note,
Mr. Grosvenor of Oxford, who not only wrote
On the subject a very fine treatise, but, still as his
Patients came in, certain soft-handed Phyllises
Were at once set to work on their legs, arms and backs,
And rubb'd out their complaints in a couple of cracks."

Puerperal Self-possession.—When the Duchesse de Berri was delivered of the child which she added to the house of her murdered husband and to the race of the Bourbons, she exhibited in a remarkable manner the determination that afterwards characterised her in more public incidents. Her labour was unusually easy and quick, and consequently the child was born before the arrival of the dignitaries of the Court, whose presence was, by Royal custom, required for authentication of the parentage and sex of the infant. This custom was more than a mere formality in the Duchess's case; for Napoleonists and Republicans had circulated a scandalous tale that her pregnancy was a got-up affair for the purpose of imposing a foundling upon France. The Duchess, therefore, would not allow the umbilical cord to be cut till one of the Court officials should appear; and on the

arriva of the marshal-in-waiting, she said to him, "Approchez, M. le Maréchal! Vous voyez l'enfant et moi, que nous ne sommes qu'un!"—*Life of Sir Robert Christison.*

Clifton Described by an Outsider.—Nobody drinks the Hotwells water now. The very pump-room, which overlooked the dreary oasis of mud spanned by the beautiful Suspension Bridge, has long been removed for the very sufficient reason that the money taken for the use of the excellent swimming bath and (the once famed) mineral water, did not pay even the outgoing expenses. For this state of things Clifton has itself to thank. Local jealousies, an utter absence of the spirit of co-operation and enterprise among its inhabitants repel and drive away strangers. Unlike Bath, even in the days of its prosperity Clifton was as dull as ditchwater, very nearly as dull as its modern representative, if dulness of so impenetrable a character can ever hope to be equalled. With beauties of situation and scenery which render it naturally attractive, Clifton, owing to the exclusiveness of its *parvenu* aristocracy, ridiculed by Sheridan in *The School for Scandal*, combined with the absence of any sort of amusement, is the last place to which a fashionable doctor would be mad enough to consign a consumptive patient. For the past thirty years the place has been the paradise of a class of German street musicians, who would be driven headlong out of London—of screaming "hooters"—of nursery-maids afflicted with incurable melancholy; but, with the exception of those, whose suicidal tendencies draw them in the direction of the Suspension Bridge, which the trustees wisely keep unprotected for their accommodation, no strangers visit Clifton except for the purpose of leaving it with as little delay as possible.—*Doctors* AND *Doctors*, 1888.

Important to Subscribers to this Journal.—A "Reader" who, except a disregard of spelling, gives me nothing beyond the Bath postmark by which to identify him, writes to me in reference to the printed letter and form enclosed with the number for last December. The part about which a "Reader" writes was worded thus: "As the Society under whose auspices the *Journal* is published is not running it to make money, will you do me the kindness to get the accompanying form filled up by one who is not yet a Subscriber?" The "Reader" says this is "a very good reason why you should supply the Journal gratis to me, but a very poor one why I should get another suscriber" *(sic)*.

I feel sure that the intelligence of Bath will not be willing to accept a "Reader" as its representative. But in case there should, there or elsewhere, be any dull person who stands in need of enlightenment, I will ask him to be so good as to insert in the letter, between "make" and "money," the words "or lose." Then I trust that my anonymous correspondent and others will see that it is their duty, by extending the circulation of the *Journal*, to secure from pecuniary loss those who, in the interests of science, took upon themselves its responsibility.

I felt no hesitation in making my appeal, because I was not asking others to help forward a commercial venture out of which the Society wanted "to make money," but only seeking their co-operation in this effort to supply the profession of the West of England and South Wales with a periodical of its own—an effort which has been enthusiastically and successfully supported, and which certainly deserves to meet with all the encouragement the doctors of the district can give it.

I regret that I have no power to supply a "Reader" with "the Journal gratis;" but if he will give me his name and address, I will ask the Managing Committee to do so. Such unexampled dulness deserves a prize.